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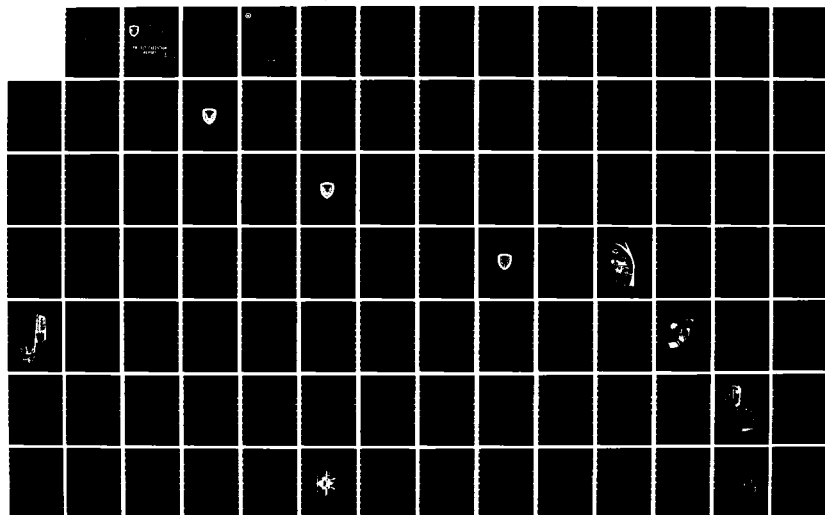
MANUFACTURING METHODS & TECHNOLOGY PROJECT EXECUTION  
REPORT FIRST CY 83(U) ARMY INDUSTRIAL BASE ENGINEERING  
ACTIVITY ROCK ISLAND IL C FULLER NOV 83

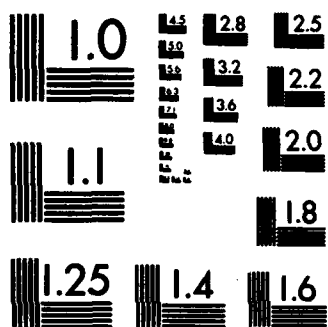
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**U.S. ARMY  
MATERIEL DEVELOPMENT  
AND READINESS COMMAND**

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**M  
M  
T**ANUFACTURING  
METHODS &  
TECHNOLOGY

**PROJECT EXECUTION  
REPORT**

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**FIRST CY 83**

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ELECTE  
DEC 21 1983  
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**PREPARED BY**

**NOVEMBER 1983**

**USA INDUSTRIAL BASE ENGINEERING ACTIVITY**

**MANUFACTURING TECHNOLOGY DIVISION**

**TIC FILE COPY**

**ROCK ISLAND, ILLINOIS 61299**

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DEPARTMENT OF THE ARMY  
US ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY  
ROCK ISLAND, ILLINOIS 61299

18 NOV 1983

REPLY TO  
ATTENTION OF:

DRXIB-MT

SUBJECT: Manufacturing Methods and Technology (MMT) Program Project  
Execution Report, First Half CY83

SEE DISTRIBUTION

1. Reference AR 700-90, paragraph 3-4j(1), 15 Mar 82, subject: Logistics, Army Industrial Preparedness Program.
2. The Project Execution Report is a summary compilation of the MMT Project Status Reports (RCS DRGMT-301) submitted to IBEA from DARCOM Major Army Subcommands (SUBMACOM) and project managers. This document is used as a management tool for monitoring trends of the MMT Program and includes a discussion of the overall DARCOM Program. There are separate sections in the report showing projects that are new, active, and completed.
3. The submission of status reports is required by AR 700-90 to be made to IBEA within 2-1/2 months after the reporting period. For this document, that date was 15 Sep 83. Due to the extremely large number of delinquent inputs (over 33% of the projects) the cutoff date was extended to 30 Sep 83. While the extension resulted in reducing the delinquents to 5%, it also delayed the publication.
4. Persons who are interested in the details of an individual project should contact the Manufacturing Technology representative at the SUBMACOM. A list of those representatives is included in Appendix IV to this report. The Project Officer for this task is Cecilia Fuller, AUTOVON 793-6521.

FOR THE DIRECTOR:

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*James W. Carstens*

JAMES W. CARSTENS  
Chief, Manufacturing Technology Division



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## DISCUSSION

### Background

The Army Manufacturing Methods and Technology (MMT) Program was established in 1964 as a part of the Army Production Base Support (PBS) Program. The MMT Program has goals of improving existing manufacturing technology, translating new technology into production line processes, and supporting the modernization and expansion of the military hardware production base. The program is governed by the provisions of AR 700-90, Chapter 3.

### Composition of the Report

This MMT Project Execution Report provides the status summaries of 448 active projects which have a total authorized cost of \$235,288,200. Total MMT program statistics, as well as the summaries of the active projects are also included. The report is compiled, edited, and published for HQ, DARCOM by the Manufacturing Technology Division of the Army Industrial Base Engineering Activity (IBEA) in accordance with AR 700-90, paragraph 3-4j(1).

Distribution of this report is extended to Army materiel developers and users and to counterparts in the Navy and the Air Force. Inquiries on the detailed technical aspects of any individual project may be answered by the MMT Program representative of the action command under which the project was completed or is being executed. Inquiries or suggestions concerning this report or other facets of the MMT Program may also be directed to the Manufacturing Technology Division of IBEA.

The report is composed of three major sections:

- a. Projects Added 1st Half, CY83 - A list divided by organization of all projects funded during the first half of CY83. Included is a narrative of the problem for each project.
- b. Final Status Reports Received During 1st Half, CY83 - A list divided by organization of all projects for which final status reports were received during the first half of CY83. Included is a narrative of the final status for each project.
- c. Summary Project Status Report - These reports are divided by organization and include a summary of funding by fiscal year and a narrative status of the work accomplished during the six month period for each active project.

## MMT Program History

Figures 1 and 2 depict the size and growth of the MMT Program since 1970. These charts last appeared in the October 1982 Project Execution Report and are updated here to include FY83 funding. Figure 1 shows funding levels and Figure 2 deals with number of projects. In each figure, the upper curve represents all of the MMT projects for each fiscal year shown. The lower curve represents only those projects which initiated a new effort during the fiscal year shown. The difference between the two curves on each figure represents those approved dollars (Figure 1) and number of projects (Figure 2) which were approved in the fiscal year as follow-on projects to efforts initiated in prior years.

In the early years, these charts show a great increase in dollars, especially from FY71 to FY74. Then, there is no appreciable growth in the MMT Program between FY74 and FY80. The funding level increases again

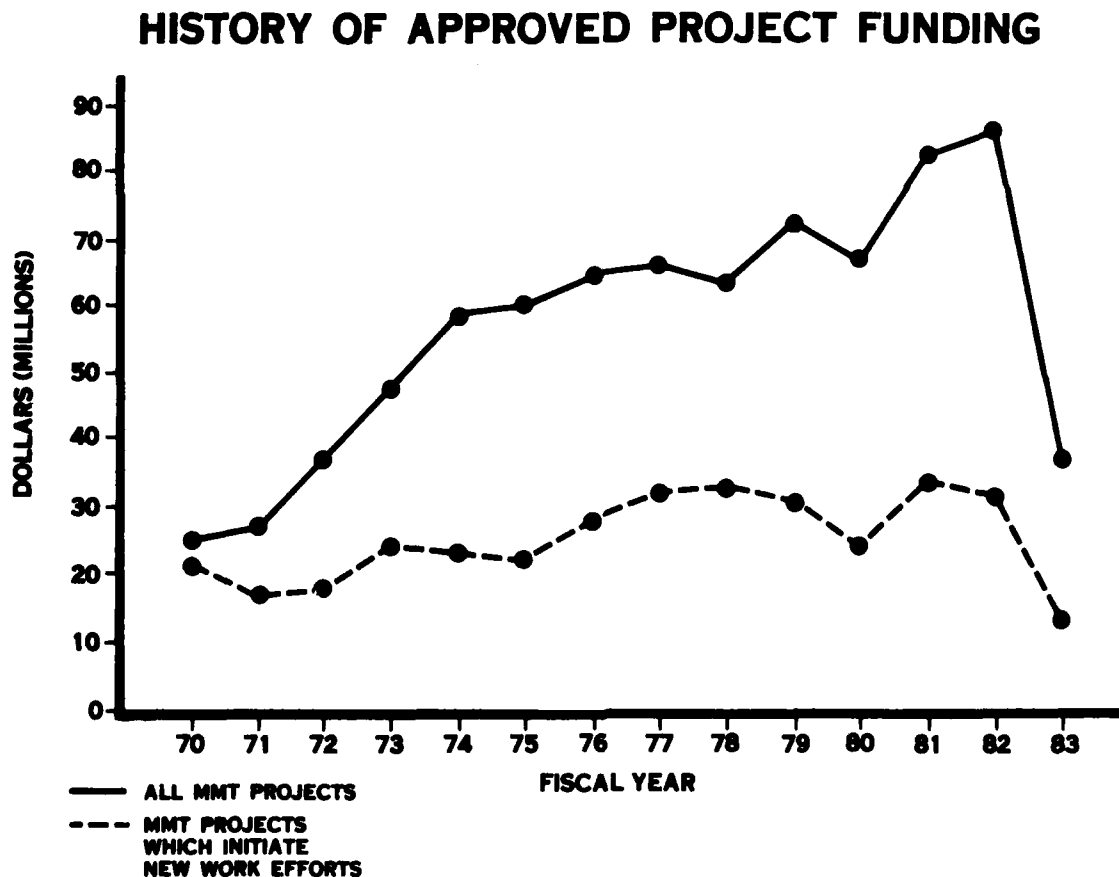


Figure 1

## HISTORY OF NUMBER OF FUNDED PROJECTS

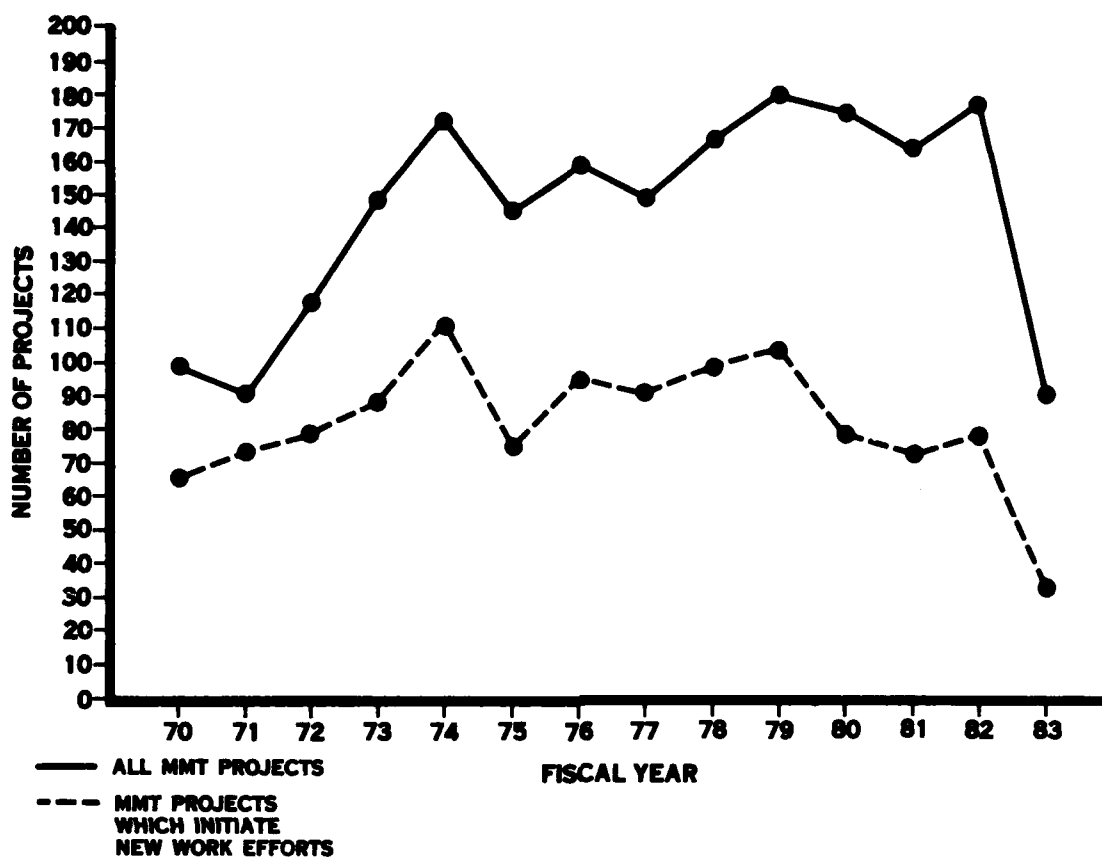


Figure 2

through FY81 and FY82, ranging from the FY80 level of \$67 million to \$86 million in FY82. These increases were felt to be the result of a renewed, active commitment to take action on improving Defense manufacturing productivity. However, in FY83 the funding level dropped dramatically to \$38 million. This was the result of a last minute conversion of the FY83 MMT Program to the R&D account. The net result of Congressional action to initially "line-out" the MMT Procurement account with subsequent Program reinstatement in the R&D account was a decrease of \$70 million worth of planned work.

Starting in FY72, less than 50% of each year's budget has been spent on initiating new work efforts. The majority of each year's funds has been spent for follow-on projects to efforts initiated in prior years. From FY74 to FY80 this trend, to a degree, reflected the fact that while

individual work efforts were becoming more costly due to inflation and technical complexity, the overall budget had remained relatively constant permitting the initiation of fewer new work efforts. With an increasing budget in FY81 and 82, one might have expected that this gap would decrease. However, the advent and execution of complex large dollar, multi-year "systems" projects continued to keep the initiation of new work efforts low and the total number of new projects fairly constant. With the great reduction of funds in FY83, priority was placed on funding follow-on work so that inefficient work discontinuity could be kept to a minimum. As a result, in FY83, the funding level for initiating new work efforts was only \$12 million. This represented less than 1/3 of the total funding, the lowest value to date.

### Status Report Submissions

There are two areas which have been of concern in the past: (1) delinquent status reports, and (2) final status reports without technical reports. Figure 3 summarizes by Command these two situations.

STATUS REPORT (RCS DRCMT 301) SUBMISSIONS

Command	*301 Reports Required	*301 Reports Submitted	Number and (%) of Delinquent 301 Reports	Number of Final 301 Reports	Number of Tech Rpts Submitted w/Final Status Reports	Number and (%) of Delinquent Technical Reports
AMETA	7	7	0 (0%)	0		
DESCOM	9	9	0 (0%)	0		
MERADCOM	10	10	0 (0%)	1	0	1 (100%)
ERADCOM	52	46	6 (12%)	10	3	7 (70%)
AMHRC	5	4	1 (20%)	0		
NLABS	4	4	0 (0%)	4	0	4 (100%)
TECOM	3	3	0 (0%)	0		
AVRADCOM	47	41	6 (13%)	7	6	1 (14%)
TSARCOM	2	2	0 (0%)	0		
CECOM	11	11	0 (0%)	0		
MICOM	39	35	4 (10%)	7	6	1 (14%)
TACOM	61	58	3 (5%)	14	6	8 (57%)
AMCCOM (Ammo)	155	150	5 (3%)	30	14	16 (53%)
AMCCOM (Weapons)	103	102	1 (1%)	5	1	4 (80%)
TOTAL	508	482	26 ** (5%)	78	36	42 (54%)

Figure 3

\*Does not include FY83 projects which were recently funded and which did not require a status report.

\*\*Delinquency rate reflects a 2 week extension of the cutoff date. Actual delinquency as of the regulatory cutoff date was 166 reports or 33%.

According to this figure, there was only a 5% delinquency in receipt of 301 reports or 26 reports not submitted by the cutoff date. This appears to be an improvement over the 8% from last reporting period and definitely better than the 18% from the reporting period previous to that one. However, this "improvement" is the result of an extension in the cutoff date from 15 September 1983 (already 2-1/2 months from the end of the report period, 30 Jun) to 30 September 1983. This extension was necessary in order to include the reports from TACOM and ERADCOM which had not yet been received by 15 September. The actual delinquency was 33% or 166 reports, a significant increase from the previous two reporting periods. The extension was granted since it was felt that a compiled report with 1/3 of the input missing would not be meaningful. Unfortunately, receipt of 1/4 of the total reports 2 weeks past an already generous cutoff date delayed the data entry and analysis with a resultant 2 to 4 week delay over the normal report publication.

Accuracy of MMT summary information for management depends on a complete submission of all the project status reports for each Command. Any delinquency creates a void in the information presented in the compiled report. Therefore, steps are taken to remind the Commands of the submission of these reports. In June 1983, a call letter was mailed out to each SUBMACOM. Enclosed with this letter was a computerized listing of the projects for which a status report was required for this reporting period. Also, phone calls were made in August to those commands whose submission had not yet been received. Even with the reminders, the general trend has been that more and more of the reports are submitted later and later. Even though the two reports prior to this one have shown less delinquencies (18% and 8%), this has mainly been as a result of the revised AR 700-90, 15 Mar 82, giving the Commands an extended 2 1/2 months from the end of the reporting period to submit their status reports. Delinquency and timeliness are areas that must be improved in order to insure a useful review of the progression of the MMT Program.

Relative to the second area of concern, there has always been a requirement that a technical report be prepared for each project. The technical report is an accepted vehicle, and in some cases the only vehicle, for true technology transfer and its importance cannot be overstated. In May 1981, a letter from the Directorate of Manufacturing Technology reinforced the requirement that final status reports will not be submitted without a completed technical report. Of the 111 final status reports submitted during the previous reporting period, 59 of them, or 53% did not have technical reports included. For this period, as noted in Figure 3, 78 final status reports were received with 42 of them, or 54% being delinquent the technical report. The percentage of delinquency has not improved. Greater strides will have to be made if true technology transfer is expected to occur. The 78 projects for which final status reports were received during this period can be found in a separate section on page 31 where the final work status is given for each project.



## Program Summary

Manufacturing Methods and Technology (MMT) projects and efforts are major elements of the Army's Manufacturing Technology (MANTECH)\* Program. AR 700-90 succinctly describes the MANTECH objective as the improvement of the industrial readiness and efficiency of the production base for Army materiel. Further defined objectives are stated in the Statement of Principles for the DOD Manufacturing Technology Program. This Statement, originating at the Deputy Under Secretary of Defense level, not only establishes ground rules for the Program but highlights the level of emphasis that the Program receives.

To attain the objectives described in the Statement of Principles, the Army funds discrete work units, called "Projects," on a yearly basis. These projects, identified by a seven-digit number, contain work requests, which upon completion will result in an end product whose technical transfer can be effected. At times, in order to have a total work package which is implementable, (i.e., which can achieve the payback for which the work was funded) the scope can be of such a magnitude that total funding in one fiscal year can be an inefficient use of resources.

In this event, the total work might be multi-year funded, (i.e., be more than one project, each having a technically transferrable end product). These total implementable work units are called "Efforts". These efforts can consist of many projects or just be one project, depending on the amount of work required to achieve the implementable technical goal. Efforts are identified by a four-digit number which is the same as the last four digits of a project or projects which make up the effort.

The following three charts (Figures 4-6) summarize MMT project reporting and funding status for the 1st Half of CY83. These summaries include data from the major Army subcommands (SUBMACOM) that have active projects and the AMMRC and AMETA sponsored projects. Cumulative figures pertaining to project distribution and expenditures of funds on contract and in-house are provided. Projects that were closed out during the reporting period are not included in the data used for these summaries. On the following three charts, comparisons are made between parallel reporting periods (1st half, CY82 and 1st half, CY83) in order to observe the project number and funding changes that occur within each Command and within the total program.

A summary of the MMT Program (Figure 4) indicates that both the number of active projects and amount of project funds have decreased by 18% in comparison with the 1st half of CY82. This significant decrease is basically attributed to the problem associated with the conversion of the FY83 MMT Program to the R&D account. With the greatly reduced FY83 budget, fewer new projects were approved during this period than were approved during the same period last year. In addition, project close-outs have increased by 17%, 78 projects in 1st half CY83 versus 65 projects in 1st half CY82. The combined effect of these two actions result in a marked decrease in the active program.

#### MMT PROGRAM SUMMARY

Organization	Number of Projects			Funding Status		Percent Change
	1st Half CY82	1st Half CY83	Percent Change	1st Half CY82	1st Half CY83	
AMETA/DESCOM	15	17	13	5,192,000	4,970,000	-4
MERADCOM	18	9	-50	6,191,800	3,819,100	-38
ERADCOM	44	42	-5	27,166,900	26,353,100	-3
AMMRC	5	5	0	13,734,500	14,713,700	7
NLABS	5	0	-100	643,500	0	-100
TECOM	3	3	0	1,614,000	1,929,000	20
AVRADCOM/TSARCOM	71	44	-38	28,739,500	24,901,500	-13
CECOM	11	11	0	8,222,900	8,723,900	6
MICOM	46	32	-30	24,083,500	17,356,500	-28
TACOM	68	59	-13	31,022,900	29,577,000	-5
AMCCOM (Ammo)	156	128	-18	116,934,300	78,399,900	-33
AMCCOM (Weapons)	105	98	-7	23,802,400	24,544,500	3
TOTAL	547	448	-18	287,348,200	235,288,200	-18

Figure 4

It can be noted that the largest decreases in number of projects were AMCCOM (Ammo) and AVRADCOM/TSARCOM while the large decrease percentage-wise was NLABS. NLABS had a 100% decrease because they closed out all of

their remaining projects and had no new projects funded. Dollarwise the largest decrease was AMCCOM (Ammo) with \$38.5 million. All increases in value were quite small, the largest being AMMRC with \$1 million.

A breakout of the active projects by fiscal year is shown in Figure 5. Over the past few years there has been a continued emphasis on closing out older projects. Currently, data is provided to DARCOM every quarter listing the active projects funded in FY79 and prior to monitor for completion. The success of this DARCOM follow-up is shown by comparing the fiscal years 75-79 for the 1st half CY82 with the current period. A year ago, there were 112 active projects for these fiscal years. There were only 47 projects for these years reported during the 1st half CY83. This is a 58% reduction in older projects. In addition the active FY80 projects were reduced 55% during the same period.

ACTIVE PROJECTS BY FISCAL YEAR

Organization	75	76	77	78	79	80	81	82	83	TOTAL
AMETA/DESCOM			1	1	1	1	3	7	3	17
MERADCOM					2	2	3	2		9
ERADCOM		1	3	3	4	6	6	8	11	42
AMMRC						1	2	1	1	5
TECOM							1	1	1	3
AVRADCOM/TSARCOM					1	2	13	22	6	44
CECOM				1	1	1	4	2	2	11
MICOM					1	2	9	12	8	32
TACOM			1	1	3	4	14	21	15	59
AMCCOM (Ammo)			1	3	11	18	26	44	25	128
AMCCOM (Weapons)		1	2	1	3	12	21	42	16	98
TOTAL	0	2	1	7	10	27	49	102	88	448

1st CY82											
TOTAL	1	4	3	14	26	64	109	156	170	0	547

Figure 5

Figure 6 indicates at what rate the project funds are being expended. Over the past three years, the active MMT program has shown an increasing contractor participation. The data from this period supports the continuance of that trend. For the 1st CY82 period, the contractor and in-house figures were \$148 million vs. \$139 million. For the 1st CY83 period,

PROGRAM FUNDING EXPENDITURES  
(MILLIONS)

Organization	No. of Projects	Authorized Funding*	Actual Contracts*		Remaining* (In-House + Planned Contract)	
			Amount	Expended	Amount	Expended
AMETA/DESCOM	17	\$ 5.0	\$ 3.7	\$ 2.0 (55%)	\$ 1.3	\$ 0.5 (37%)
MERADCOM	9	3.8	3.2	2.7 (85%)	0.6	0.3 (55%)
ERADCOM	42	26.4	20.9	14.2 (68%)	5.4	2.0 (36%)
AMMRC	5	14.7	5.9	**	8.8	**
TECOM	3	1.9	0.0	0.0 (0%)	1.9	1.7 (86%)
AVRADCOM/TSARCOM	44	24.9	20.3	10.6 (52%)	4.6	2.1 (44%)
CECOM	11	8.7	6.1	3.0 (48%)	2.6	0.4 (16%)
MICOM	32	17.4	12.2	8.7 (70%)	5.1	2.4 (46%)
TACOM	59	29.6	19.2	11.2 (58%)	10.4	2.3 (22%)
AMCCOM (Ammo)	128	78.4	42.8	28.6 (66%)	33.6	16.4 (45%)
AMCCOM (Weapons)	98	24.5	7.8	4.0 (51%)	16.7	5.5 (33%)
TOTAL	448	\$235.3	\$142.1	\$85.0 (60%)	\$ 91.0	\$33.6 (37%)

1st CY82 TOTAL	547	\$287.2	\$148.3	\$88.5 (60%)	\$139.0	\$40.7 (29%)
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Figure 6

\*All figures rounded to one decimal place.

\*\*AMMRC MTT reporting system did not individually identify either in-house expenditures or contract expenditures.

these same respective values are an even more diverse \$142 million vs. \$91 million. This is in part due to the extended cutoff date which resulted in less apparent delinquencies, which in turn resulted in more projects having funds cited on contract than that which was true during the comparison report period. Figure 6 shows that compared to the same period last year, contractor expenditures are the same, 60%, and in-house expenditures are up (29% vs. 37%). Again these improved figures can be related to some degree to the inclusion of more current data which resulted from less report delinquencies (an apparent 5% this period). It should also be noted that the numbers in the two expenditure columns will be lower than the actual values because the AMMRC MTT expenditures are not identified in their reporting system. The 26 delinquent projects also have an impact on this chart. There would have been additional in-house and contract funds expended that were not reported to IBEA.

**MMT PROGRAM**

**PROJECTS ADDED 1st HALF, CY83**



PROJECTS ADDED IN 1ST HALF, CY83

AMETA

D 83 5052

ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT

TECHNICAL SCIENTIFIC AND ENGINEERING DATA IS CONTINALLY BEING GENERATED WITHIN THE ARMY AND NEEDS TO BE COLLECTED IN APPROPRIATE DOCUMENTS.

DESCOM

G 83 0002

CAM APPLICATION OF ROBOTICS TO SHELTER REFINISHING

SPRAY PAINTING AND SANDING OF ALUM SKINNED MILITARY CONTAINERS IS LABOR INTENSIVE AND CREATES A HARSH WORKING ENVIRONMENT. DEVICES TO SENSE PRESENCE AND ABSENCE OF PAINT + TO CONTROL HEAT BUILD-UP TO PREVENT ALUM SKIN DELAMINATION ARE NEEDED.

G 83 7001

AUTO DYNAMOMETER CONTROL F/STANDARDIZED INSPECT TEST (CAM)

ALL ENGINES ARE TORN DOWN WHILE 20% COULD BE RESTORED TO OPERATION WITHOUT PHYSICAL TEARDOWN. TEARDOWN IS 1/3 COST OF OVERHAUL. ALL ENGINES REBUILT REQUIRE A 4 HOUR DYNAMOMETER OPERATIONAL TEST CYCLE.

ERADCOM

H 83 3010

HYBRID MODULATOR FOR PULSED IMPATT MILLIMETER WAVE SOURCES

TO ESTABLISH A MANUFACTURING CAPABILITY FOR PRODUCTION OF IMPATT DIODES WHICH ARE UNIFORM ENOUGH TO BE FIELD REPLACEABLE IN ARMY SYSTEMS.

H 83 5019

LASER-CUT SUBSTRATES FOR MICROWAVE TUBES

PRESENT CFA JAMMER TUBES EMPLOY HIGH COST, PRECISION ANODE CIRCUITS LIMITING UTILIZATION IN OPTIMIZED EW SYSTEMS. HIGH PERFORMANCE AND LOW WEIGHT AT MINIMUM COST IS REQUIRED TO FIELD DESIRED EW SYSTEMS.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

H 83 5107

94 GHZ PULSED POWER COMBINER

DIODE PARAMETERS VARY GREATLY FROM UNIT TO UNIT. PACKAGING METHODS ARE UNSATISFACTORY FOR COMBINER CIRCUITS. TUNING COMBINER ELEMENTS AND ADJUSTING ASSOCIATED MODULATING CIRCUITS TAKES WEEKS OF EFFORT TO OBTAIN REQUIRED PERFORMANCE LEVELS.

H 83 5109

PRECISION LOW-COST SAW DELAY LINES FOR UHF APPLICATIONS

BROADBAND SAW DELAY LINES ARE REQUIRED FOR SIGNAL STORAGE DEVICE BANDWIDTH IS FIXED BY NEED TO STORE SIGNALS FOR A TEN MICROSECOND DURATION FOR SIGNALS RANGING OVER 500 MHZ BAND. DEVICE INSERTION LOSS AND MULTIPLE TRANSMIT REFLECTIONS MUST BE MINIMAL

H 83 5111

VAPOR GROWTH FOR 3RD GENERATION PHOTOCATHODE

LIQUID EPITAXIAL GROWTH PROCESS REQUIRES- A) LARGE AND COSTLY HIGH TEMP REACTORS; B) LARGE QUANTITIES OF SATURATION MELT MATERIALS, C) COSTLY QUALITY GALLIUM ARSENIDE SUBSTRATES, D) LENGTHY OPERATION PROCESS PER SINGLE GROWTH.

H 83 5151

LIQUID PHASE EPITAXY OF HGCDTE F/COMMON MODULE DET ARRAYS

LOW YIELD ON CURRENT METHOD OF MANUFACTURE OF COMMON MODULE DETECTOR ARRAYS. GROWTH OF HGCDTE CRYSTALS REQUIRES MANUAL LAPPING, POLISHING + THINNING TO ACHIEVE PERFORMANCE SPECIFICATIONS.

H 83 5162

EXJAM BATTERY MANUFACTURING TECHNOLOGY, PHASE II

PRESENT R AND D MODELS OF UNATTENDED EXPENDABLE JAMMER RESERVE POWER SUPPLY (UEJPS) ARE HAND MADE 1 OR 2 AT A TIME. UNLESS FABRICATION/ASSEMBLY ARE PRODUCTION ENGINEERED, LABOR COSTS WILL MAKE THE BATTERY PROHIBITIVELY EXPENSIVE.

F 83 5168

AUTOMATIC RETICLE INSPECTION SYSTEM, PHASE I

THERE IS NO WAY TO CHECK TAPE-GENERATED RETICLE PATTERNS AGAINST THE COMPUTER-GENERATED MASTER TAPE. VISUAL INSPECTION OF RETICLES FOR PINHOLES OR DUST PARTICLES IS VERY DIFFICULT.



PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

H 83 5174

CAN SPUTTERING CONTROL FOR ZNO

GAS MIXTURE, ZNO PURITY + SPUTTERING PARAMETERS ARE MANUALLY MONITORED USING A MASS ANALYZER. CORRECTIONS IN FLOW + DEPOSITION PROCESSES ARE SLOW AND PERFORMED AFTER OCCURRENCE.

H 83 5180

MMT FOR METAL DEWAR AND UNBONDED LEADS

THE GOLD WIRE BONDED CONNECTIONS ARE MADE BY HAND WHICH IS A TEDIOUS AND EXPENSIVE PROCESS. THE GLASS STEM IS HAND FASHIONED AND IS PRONE TO DAMAGE.

H 83 5196

INDUSTRIAL PRODUCTIVITY IMPROVEMENT - ELECTRONICS

MANY ELECTRONICS ITEMS PRODUCED FOR ARMY ARE BUILT IN FACTORIES NOT USING MODERN METHODS AND EQUIPMENT, AUTOMATIC MATERIALS HANDLING SYSTEMS, OR COMPUTERIZED MANAGEMENT INFORMATION SYSTEMS. THESE PLANTS MUST BE UPDATED TO IMPROVE PRODUCTIVITY.

AMMRC

H 83 6350

MATERIALS TESTING TECHNOLOGY (MTT)

DESTRUCTIVE AND CERTAIN CONVENTIONAL NON-DESTRUCTIVE TESTING TECHNIQUES ARE RESPECTIVELY UNSUITED AND INADEQUATE OR HARD TO BE ADAPTED TO ON-LINE PRODUCTION TESTING USAGE.

TECOM

C 83 5071

TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES

ARTILLERY, VEHICLE AND ELECTRONIC CONVENTIONAL TEST CAPABILITIES NEED TO BE UPGRADED TO PROVIDE MORE TIMELY ACCURATE TEST DATA FOR THE TEST AND EVALUATION PROCESS.

AVRADCOM

I 83 7298

HIGH TEMPERATURE VACUUM CARBURIZING

GEAR CARBURIZING IS PRESENTLY CARRIED OUT WITH A RELATIVELY SLOW ENDOTHERMIC PROCESS, TYPICALLY AT 1700 DEG F, WHICH REQUIRES SURFACE PROTECTION AGAINST DECARBURIZING DURING THE CYCLE OR A POST HEAT TREAT REMOVAL OF THE DECARBURIZED LAYER.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

1 83 7382

LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A

MANUFACTURING TECHNOLOGY FOR CURE CURING GLASS AND GRAPHITE FILAMENT WOUND MAIN ROTOR BLADES HAS NOT BEEN ESTABLISHED FOR THE PRODUCTION ENVIRONMENT.

1 83 7389

PRODUCTION OF ALUMINUM AIRFRAME COMP (SUPERPLASTIC FORMING)

CURRENT METHODS OF MACHINING ALUMINUM FORGINGS ARE EXPENSIVE AND REQUIRE AN EXCESSIVE NUMBER OF PARTS.

1 83 7427

ATTACK HELICOPTER PRODUCTIVITY IMPROVEMENT (API) PROGRAM

THE MANUFACTURING FACILITIES, METHODS, AND PRODUCTION MANAGEMENT SYSTEMS OF PRIME CONTRACTORS ARE NOT IN THE LATEST STATE-OF-THE-ART CONDITION. THIS RESULTS IN HIGH COST AND LATE DELIVERY.

1 83 7433

HMT - IPI PGM - BELL HELICOPTER, INC. - AHIP

THE MANUFACTURING FACILITIES, METHODS AND PRODUCTION MANAGEMENT SYSTEMS AT BELL HELICOPTER TEXTRON, INC ARE NOT UP TO THE LEVEL IN THE GENERAL AEROSPACE INDUSTRY. THIS RESULTS IN HIGH COST AND SLOW DELIVERY.

1 83 7465

ADVANCED COMPOSITE SENSOR SUPPORT STRUCTURE (ACS-3)

THE CURRENT PROTOTYPE SENSOR SUPPORT STRUCTURE IS COMPOSED OF BERYLLIUM WHICH IS TOXIC, EXPENSIVE AND SOLE SOURCE SUPPLIED.

CECOM

F 83 3068

INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES

PRESENTLY AVAILABLE VARACTORS AND PIN DIODES MADE BY SILICON DIODE TECHNOLOGY ARE EXPENSIVE. THE IR PRODUCTION TECHNIQUES ARE VERY LABOR INTENSIVE, YIELDS ARE LOW, AND UNIFORMITY IS POOR. MATCHING REQUIRES EXTENSIVE TESTING.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

F 83 3094

COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS

COMMUNICATIONS EQUIPMENT IS MANUFACTURED USING LABOR INTENSIVE, LOW VOLUME PROCESSES. MACHINES ARE OLD AND UNAUTOMATED. NEW METHODS, PROCESSES AND EQUIPMENT ARE NEEDED.

MICOM

3 83 1051

REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS

PRESENT ASBESTOS CONTAINING INSULATORS CAN NO LONGER BE MANUFACTURED AFTER 1981 DUE ITS BEING IDENTIFIED AS A CARCINOGEN. THUS THE GOVT HAS LOST THE CAPABILITY OF USING INSULATING MATERIALS THAT HAS PROVEN TO BE AN EXCELLENT THERMAL BARRIER.

3 83 1060

ELECTRICAL TEST AND SCREENING OF CHIPS

ONE UNRELIABLE CHIP IN MILITARY ELECTRONIC ASSEMBLIES CAUSES REJECTION OR DESTRUCTION OF THE ENTIRE PACKAGE. PRESENT MEANS FOR DETERMINING CHIP RELIABILITY OR INTEGRITY IS A PROBE TESTING TECHNIQUE WHICH IS TIME CONSUMING AND DESTRUCTIVE.

3 83 1072

MULTIPLE HIGH RELIABILITY/LOW VOLUME LSI MANUFACTURING (CAM)

PRESENT PROCESSES FOR LSI CIRCUITS DO NOT ADEQUATELY SUPPORT MILITARY NEEDS. LSI MFG FACILITIES ARE STRUCTURED TO HANDLE HIGH VOLUME RUNS IN A SINGLE PROCESS TECHNOLOGY.

3 83 1086

COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS

CURRENT HIGH PERFORMANCE ROCKET MOTOR COMPONENTS UTILIZE MARAGING STEELS IN LARGE QUANTITIES. COBALT, ONE OF THE KEY INGREDIENTS COMES FROM POLITICALLY SENSITIVE AREAS AND IS BECOMING DIFFICULT TO OBTAIN.

3 83 1089

INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS

CURRENT FILAMENT WOUND COMPOSITE ROCKET MOTOR CASES REQUIRE FORGED METAL POLE PIECES, NOZZLE CLOSURE ATTACHMENT RINGS, AND OTHER ATTACHMENT RINGS. THESE COMPONENTS ARE EXPENSIVE, AND REQUIRE LONG LEAD TIME PROCUREMENT.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

3 83 1126

WOUND ELASTOMER INSULATOR PROCESS

LARGE TACTICAL ROCKET MOTOR INSULATORS ARE COSTLY, LACK DESIGN CHANGE FLEXIBILITY AND SUFFER LONG LEAD TIMES. CURRENT PROCESSES INVOLVE BONDING TOGETHER FINISHED SECTIONS OR LAY-UP OF GREEN STOCK FOLLOWED BY STITCHING, CURING AND FINISHING TO SIZE.

3 83 3115

ENGINEERING FOR METROLOGY AND CALIBRATION

MEASUREMENT SCIENCES OR METROLOGY MUST BE CONTINUALLY ADVANCED IN RELEVANT TECHNOLOGY AREAS TO KEEP PACE WITH MANY ARMY PROGRAMS.

3 83 3449

ALTERNATE PROCESS FOR IPDI

A NUMBER OF CHEMICAL INGREDIENTS USED IN SOLID ROCKET PROPELLANTS HAVE BECOME UNAVAILABLE BECAUSE SOME OF THE REAGENTS ARE HAZARDOUS.

TACOM

4 83 5005

COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE II)

MACHINING AND OTHER PROCESSES ADD COST TO THE FINISHED COMPONENT.

4 83 5053

ADIABATIC DIESEL ENGINE COMPONENTS (PHASE II)

FABRICATION OF HIGH EFFICIENCY, HIGH TEMPERATURE DIESEL ENGINES REQUIRES ADVANCED MATERIALS. ENGINES FABRICATED WITH CERAMIC COMPONENTS HAVE BEEN DEMONSTRATED IN R+D BUT MANUFACTURING METHODS FOR SERIAL PRODUCTION COMPONENTS ARE LACKING.

4 83 5068

NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE III)

METALLIC COMPONENTS ARE DETERIORATED BY THE ENVIRONMENT.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

4 83 5075

MILITARY ELASTOMERS FOR TRACK VEHICLES

TRACK LIFE IS HELD AT ITS PRESENT LEVEL BY FAILURE OF RUBBER COMPONENTS SUCH AS BUSHINGS, PADS AND BLOCKS.

4 83 5082

FLEX MACHINING SYS (FMS) PILOT LINE F/TLV COMPS (CAM) (PH V)

PARTS FOR TRACKED COMBAT VEHICLES ARE TYPICALLY NOT MANUFACTURED IN LARGE QUANTITIES. BECAUSE OF THIS, MASS PDN TECHNOLOGIES THAT RESULT IN LOWER PDN COSTS ARE NOT USED.

4 83 5090

IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE V)

MACHINE DATA ON NEWER MATERIALS AND NEW REMOVAL RATES ARE NOT ESTABLISHED.

4 83 5091

HEAVY ALUMINUM PLATE FABRICATION (PHASE II)

MANY COMBAT AND TACTICAL VEHICLE HULLS AND THEIR COMPONENTS ARE FABRICATED FROM HEAVY ALUMINUM PLATE. CUTTING THIS HEAVY ALUMINUM PLATE TO SPECIFIED CONTOURS AND WELDING THE PIECES TOGETHER REQUIRES A GREAT DEAL OF MANUAL LABOR.

4 83 6054

ADVANCED METROLOGY SYSTEMS INTEGRATION (PHASE II)

THE METROLOGY METHODS USED IN MILITARY VEHICLE MANUFACTURE, IN GENERAL, EMPLOYS CONTACT GAUGES MANUALLY EMPLOYED. THIS REPRESENTS A SUBSTANTIAL PART OF THE COST OF OUR MILITARY VEHICLES.

4 83 6057

ABRAMS M1 COMBAT VEHICLE

MATERIALS AND MANUFACTURING PROCESSES EMPLOYED IN THE MFG OF THE M1 CAN BE IMPROVED BY INCORPORATING NEW TECHNOLOGIES TO THE CURRENT SYSTEM. THIS WILL ENABLE THE M1 TO BE PRODUCED MORE ECONOMICALLY.

4 83 6059

M2 AND M3 FIGHTING VEHICLE SYSTEM

MATERIALS AND MANUFACTURING PROCESSES EMPLOYED IN THE MFG OF THE FVS CAN BE IMPROVED BY INCORPORATING NEW TECHNOLOGIES TO THE CURRENT SYSTEM. THIS WILL ENABLE THE FVS TO BE MANUFACTURED MORE ECONOMICALLY.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

4 83 6079

AGT-1500 ENGINE

THE NEED TO REDUCE COST AND IMPROVE PERFORMANCE OF THE AGT-1500 TURBINE ENGINE REQUIRES NEWER AND MORE INNOVATIVE MANUFACTURING TECHNOLOGY.

4 83 6095

ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS (PHASE I)

A NUMBER OF TECHNOLOGICAL AREAS HAVE BEEN IDENTIFIED WHICH CAN BE APPLIED AS COST REDUCING MEASURES OR AS A MEANS OF IMPROVING THE MANUFACTURE COST OF THE M1 ABRAM TRANSMISSION.

4 83 6107

IMPROVED MBT TRACK

INCREASED VEHICLE PERFORMANCE REQUIREMENTS NECESSITATE HIGHER PERFORMANCE TRACKS THAN THOSE AVAILABLE TODAY. TO IMPLEMENT NEW METAL COMPOSITE, HIGHER STRENGTH FERROUS ALLOYS, AND TITANIUM NEW MANUFACTURING PROCESSES MUST BE ESTABLISHED.

4 83 6121

CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE

MANUFACTURING TECHNIQUES FOR THE BFV ARE IN NEED OF IMPROVEMENT IN THE AREA MATERIAL SELECTION, MANUFACTURING PRINCIPALS, AND QUALITY CONTROL. IN ADDITION CURRENT TECHNIQUES ARE EXTREMELY LABOR INTENSIVE.

4 83 7001

ADVANCED CERAMIC ARMOR COMPONENTS FOR COMBAT VEHICLES

A NUMBER OF MATERIAL COMBINATIONS FOR ARMOR HAVE BEEN DEVELOPED BUT ARE NOT COMMERCIALY AVAILABLE.

AMCCOM (AMMO)

5 83 0900

AUTOMATED MULTIPLE FILTER LIFE TESTER

THERE IS A LOW TEST RATE CAPACITY AND AN INCREASING VOLUME OF TESTING FOR THE CURRENT FILTER LIFE TEST EQUIPMENT.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

S 83 0913

SPIN COATING OF DECON AGENT CONTAINERS

CURRENT METALLIC DECON AGENT CONTAINERS CORRODE BEFORE THE REQUIRED SHELF LIFE OF THE AGENTS IS REACHED. ALTERNATIVE CONTAINERS ARE NOT AVAILABLE, BUT PLASTIC LINERS HAVE BEEN SHOWN TO EXTEND THE LIFE OF CURRENT CONTAINERS SIGNIFICANTLY.

S 83 0924

MANUFACTURING PROCESS FOR GAS MASK CANISTERS

THE CANADIAN GAS MASK CANISTER IS BEING ADAPTED TO THE US STANDARDS UNDER A MACI PROGRAM. THE CANADIANS ARE HAVING DIFFICULTY PRODUCING THE CANISTERS RESULTING IN HIGH REJECT RATE.

S 83 0925

PROTECTIVE MASK LEAKAGE TESTING

CURRENT GAS MASK TESTER DOES NOT SIMULATE THE ACTUAL FIELD USE AND IS NOT SENSITIVE ENOUGH TO DETECT SMALL LEAKS

S 83 1295

MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT

CHARCOAL FILTER TESTING EQUIPMENT NEEDED TO PROVIDE TESTING CAPABILITY FOR VARIOUS CHEMICAL AGENTS DOES NOT EXIST.

S 83 1348

SUPER TROPICAL BLEACH

THERE IS A MAJOR SHORTFALL BETWEEN THE FY78 REQUIREMENTS FOR THIS ITEM AND THE QUANTITY OF IMPORTED CHLORINATED LIME KNOWN TO BE AVAILABLE.

S 83 1701

BULK TRANSFER OF CHEMICAL MATERIALS

CURRENT TECHNIQUE FOR RETRIEVAL WEIGHING AND TRANSPORTING PYROTECHNIC CHEMICAL CONSTITUENTS ARE ACCOMPLISHED BY LABOR INTENSIVE OPERATION AND ARE UNSAFE.

S 83 1709

IMPROVED PROCESSING OF PYROTECHNIC MIXTURES

ACCIDENTAL INVOLVEMENT OF MIXTURES DURING PROCESSING IS A SERIOUS PERSONNEL SAFETY PROBLEM DUE TO EXPOSURE TO FIRE AND EXPLOSIVE HAZARDS.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

5 83 4061

NITROGUANIDINE PROCESS OPTIMIZATION

A NITROGUANIDINE FACILITY IS UNDER CONSTRUCTION AT SAAP TO BE OPERATIONAL IN FY80. IT UTILIZES PROCESSES NOT PREVIOUSLY USED COMMERICALLY AND IT CONTAINS MANY RECIRCULATION AND SUPPORT LOOPS, THE OPERATION OF WHICH ARE STRONGLY INTERDEPENDENT.

5 83 4062

AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS

THE MANUFACTURE AND ASSEMBLY OF THE 60/81MM PRODP CHARGE INCREMENT CONTAINER IS LABOR INTENSIVE AND DOES NOT MEET PRODUCTION REQUIREMENTS.

5 83 4298

EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE

EFFLUENT FROM AMMONIA RECOVERY COLUMN CONTAINS SIGNIFICANT AMOUNTS OF DMN. DMN IS ONE OF THE EPA CONSENT DECREE COMPOUNDS FOR WHICH WATER QUALITY CRITERIA MUST BE PROVIDED. EPA INSISTS ON LEVELS BELOW 0.3 PPB.

5 83 4444

BODY FOR M42/M46 GRENADE

THE PRESENT METHOD OF PRODUCING THE BODY FOR THE M46 AND M42 GRENADE IS COSTLY.

5 83 4449

PROCESS IMPROVEMENT FOR COMP C-4

THE EXISTING FACILITIES WHICH ARE COMMON TO THE MANUFACTURE OF COMP B AND THE OTHER RDX COMPOSITION WOULD LIMIT THE AVAILABILITY OF THESE ITEMS BELOW THEIR MOB REQUIREMENTS.

5 83 4453

DETERMINE SPACING OF MUNITION ITEMS TO PREVENT PROPAGATION

THE EXISTING SAFETY MANUAL (AMCR 385-100) HAS BECOME ANTIQUATED BY RECENT ADVANCES IN WEAPONS TECHNOLOGY. THERE IS A NEED TO UPGRADE ACCIDENTAL DETONATION SUPPRESSION CRITERIA.

5 83 4489

ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES

MUCH WORK HAS BEEN DONE IN THE PROPELLANTS AND EXPLOSIVES PLANTS TO MEET THE POLLUTION ABATEMENT STANDARDS. HOWEVER, ALL OF THE GOALS HAVE NOT YET BEEN MET.



PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

5 83 4511

DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS

SODIUM HYDROXIDE IS PRESENTLY USED TO NEUTRALIZE NITRIC ACID IN WEAK ACETIC ACID PRIOR TO ITS PRIMARY DISTILLATION AND IN THE FINAL SLUDGE TO KILL THE WASTE RDX. A BY PRODUCT OF THIS REACTION IS A LOW GRADE SODIUM NITRATE.

5 83 4529

MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES

THE HEAT PROJECTILE LINER MUST BE HELD TO .003 IN ANY TRANSVERSE PLANE AND WITHIN .006 ALONG ITS LENGTH. THE TOLERANCES ARE AT THE EXTREME LIMIT OF ACCURACY. THE XM815 LINER REQUIRES PRECISION AN ORDER OF MAGNITUDE GREATER (.0005).

5 83 4533

LOVA PROPELLANT PROCESSING

PDN OF SOLVENT PROCESS BINDER BASED LOVA PROPELLANT REQUIRES PRECISE CLASSIFICATION OF IN-PROCESS MATERIALS IN ORDER TO ASSIGN AVAILABLE PDN FACILITIES. THE USE OF UNCONVENTIONAL SOLVENTS RAISES CONCERN ABOUT POLLUTION CONTROL.

5 83 4534

SAWS BULLET CONVERSION OF SCAMP EQUIPMENT

AN AMERICANIZED VERSION OF BELGIUM SS-109 WILL BE USED IN THE SAW SYSTEM. THIS EFFORT IS DIRECTED TOWARD DEVELOPMENT OF CONVENTIONAL PROCESSES TO MASS PRODUCE SAWS AMMUNITION ON SCAMP EQUIPMENT.

5 83 4538

5.56 SAWS LINK ORIENTER AND FEED SYSTEM

THE M27 LINKS ARE MANUALLY ORIENTED AND PACKED AT THE LINK MANUFACTURERS. AT THE LOADING PLANT, LINKS MUST BE MANUALLY UNPACKED AND FED INTO THE LINKING MACHINES, WHICH IS TIME CONSUMING AND COSTLY.

5 83 4540

CAC03 COATING OF 7.62MM BALL PROPELLANT

A SAFE AND EFFICIENT PROCESS IS NOT CURRENTLY AVAILABLE FOR THE COATING OF 7.62MM BALL PROPELLANT WITH CALCIUM CARBONATE.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

5 83 4547

PROC TECH FOR XM76 IR SCREENING GREN ' XM49 SMOKE GENERATOR  
NEW IR SMOKE SCREENING TECHNOLOGY NEEDED.

5 83 4548

PYRO SAFETY ENHANCEMENT

PYROTECHNIC MIXING REQUIRES INCREASED PERSONNEL SAFETY  
FEATURES.

5 83 4563

PROCESS IMPROVEMENT FOR TANK DU PENETRATORS

CURRENT PRODUCTION PROCESSES ARE INCAPABLE OF MEETING TIME  
CYCLES AND QUANTITIES OF D/U PROJECTILES AS PLANNED IN  
FACILITIZATION STUDIES.

5 83 4605

PROPELLANT BED DEPTH CONTROL IN CASBL AIR DRY

KADFORD AAP HAS ENCOUNTERED PROBLEMS IN CONTROLLING BED  
DEPTH DURING DRYING OF SINGLE BASE PROPELLANT.

AMCCOM (WPNS)

6 83 7724

GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM)

A PROLIFERATION OF DESIGNS AND PARTS EXIST FOR THE  
PRODUCTION OF CANNON. UNIQUE MANUFACTURING ROUTINGS ARE  
GENERATED FOR EACH COMPONENT AND CUSTOM TOOLING AND  
FIXTURING IS REQUIRED.

6 83 7985

SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY

GUN BARREL MFG PROCEDURES REFLECT ANTIQUATED TECHNOLOGY AND  
RELY ON MASS REMOVAL OF MATERIAL BY CONVENTIONAL MACHINING  
METHODS. CURRENT EQUIP REPRESENTS 1940-50 TECHNOLOGY. NEW  
MATERIALS COMPOUND THE PROBLEM.

6 83 8102

APPL OF POWDER METALLURGY FORGING TO WEAPON COMPONENTS

FORGINGS AND CASTINGS ARE FABRICATED OVERSIZE AND  
SUBSEQUENTLY MACHINED DOWN TO FINAL DIMENSIONS. FINAL  
COMPONENT CONFIGURATION INVOLVES A LARGE AMOUNT OF MANPOWER  
AND MACHINES TO REMOVE ALLOY STEEL AS CHIPS.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

6 83 8103  
HIGH VELOCITY MACHINING

SPEED OF MACHINING CANNON TUBES IS LIMITED WITH CURRENT EQUIPMENT.

6 83 8120  
ADAPTIVE CONTROL TECHNOLOGY (CAM)

CURRENT GRINDING PROCESSES DO NOT TAKE ADVANTAGE OF THE GRINDING WHEEL CUTTING EFFICIENCY. PRECISION TOLERANCES ARE DIFFICULT TO HOLD DUE TO PART HEATING. WHEEL WEAR RATES INCREASE EXPONENTIALLY WITH FEED RATES AND LIMIT PRODUCTIVITY.

6 83 8154  
COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNON

NUMERICAL CONTROL MACHINE TOOLS OFFER MANY ADVANTAGES OVER CONVENTIONAL MACHINE TOOLS BUT HAVE CERTAIN DISADVANTAGES. ONE PROBLEM AREA IS GETTING MACHINE INSTRUCTIONS TO THE MACHINE TOOL AND COLLECTING MANAGEMENT INFORMATION.

6 83 8231  
IMPROVED CASTING TECHNOLOGY (CAD/CAM)

EXCESSIVE METAL MUST BE MELTED IN CASTING OPERATIONS. THE YIELD RATIO OF SOME CASTS IS TOO LOW AND THE GATES AND RISERS TOO DIFFICULT TO CUT OFF. MATERIAL PROPERTIES OFTEN VARY WITH CASTING PROCEDURES.

6 83 8243  
COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS

CHROMIUM PLATING OF CANNON BARRELS IS A COMPLICATED, MULTI-STAGE PROCESS WHICH IS MANUALLY CONTROLLED. MANUAL MANIPULATION OF VALVE STRESS, ETC., IS SLOW, SOMETIMES HAZARDOUS, AND CAN RESULT IN DEGRADED DEPOSIT QUALITY DUE TO HUMAN ERROR.

6 83 8245  
APPLICATION OF EROSION RESIST LOW CONTRACTION CHROMIUM PLATE

HIGH CONTRACTION CHROMIUM COATING IS CURRENTLY USED TO RESIST EROSION IN GUN BORES. INHERENT PROPERTIES MAKE THE COATING SUSCEPTIBLE TO SHEARING AND FLAKING.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

6 83 8251

IMPROVED MELTING PRACTICES

THERE IS A HIGH REJECTION RATE FOR CASTING POURED AT RIA BECAUSE MODERN TECHNIQUES ARE NOT USED TO MEASURE AND CONTROL PROCESS PARAMETERS AND POROSITY.

6 83 8305

INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM)

MI SYSTEMS ARE APPLIED LOCALLY BUT THERE IS NO DATA MANAGEMENT SYSTEM FOR THE ENTIRE MFG ACTIVITY. THIS INCREASES COST DUE TO LONG LEAD TIMES, SCHEDULE INTERRUPTIONS AND SHORTAGES OF MACHINE AVAILABILITY, LABOR AND MATERIAL.

6 83 8306

ON-LINE PRODUCTION INFORMATION SYSTEM - RIA (CAM)

THE MANUFACTURING DATA BASE CANNOT BE ACCESSED THROUGH AN ON-LINE DATA BASE SYSTEM, MAKING INTEGRATION OF AUTOMATED SYSTEMS FOR PROCESS PLANNING, TIME STDs GENERATION, FACILITIES/MOBILIZATION PLANNING AND PRODUCTION CONTROL SIMULATION DIFFICULT.

6 83 8324

PROCESS CONTROLS FOR POWDERED METAL WEAPON COMPONENTS

PRESENT METHODS OF PRODUCING WEAPON COMPONENTS IS MAINLY BY MACHINING FROM WROUGHT STOCK. THIS IS A HIGH COST METHOD WHICH PRODUCES MUCH ALLOY STEEL SCRAP.

6 83 8351

IMP MANUFACTURE OF QUADRANT FLATS AND MUZZLE BRAKE KEYWAY

PRESENT METHODS OF MACHINING FLATS AND KEYWAYS REQUIRE TWO SET-UPS ON TWO SEPARATE MACHINE TOOLS WITH ATTENDANT MATERIEL HANDLING REQUIREMENTS.

6 83 8352

SKIVING (METAL SHAVING) GUN TUBE BORES

INTERMEDIATE TUBE BORE HUNING OPERATIONS FOR SURFACE FINISH AND SIZE CONTROL ARE A TIME CONSUMING, COSTLY METAL REMOVAL PROCESS. COUNTERBORING OPERATIONS PRIOR TO SWAGE AUTOFRETTAGE ARE ALSO SLOW, TIME CONSUMING, AND HIGH IN TOOLING COSTS.

PROJECTS ADDED IN 1ST HALF, CY83  
(CONTINUED)

6 83 8354

CUTTING OF HOT ROTARY FORGE TUBES

CUTT-OFF OF MUZZLE AND BREECH ENDS OF ROTARY FORGED TUBES  
IS A COSTLY AND INEFFICIENT OPERATION PRIOR TO HEAT  
TREATING.

TOTAL PROJECTS ADDED IN 1ST HALF, CY83      88

**MMT PROGRAM**

**FINAL STATUS REPORTS RECEIVED DURING 1st HALF, CY83**



FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83

MERADCOM

E 79 3709

CONTINUOUS LENGTH FUEL HOSE

RETURNED THIS STATUS REPORT TO THE COMMAND FOR  
CLARIFICATION OF FUNDING AND WORK ACCOMPLISHED.

ERADCOM

H 80 3012

INFRA-RED SOURCE FOR AN/ALQ-144

ILC TECHNOLOGY MACHINED OVER 200 CYLINDRICAL GRAPHITE  
HEATER ELEMENTS USING IN-PROCESS RESISTANCE MEASUREMENTS TO  
ATTAIN EXCELLENT YIELD. UNION CARBIDE MADE OVER 5 BORON  
NITRIDE COATING RUNS SINCE 12/80. THE CONTRACT WAS  
TERMINATED. NO TECH REPORT.

F 81 3031

10.6 UM CO-2 TEA LASERS

RAYTHEON ESTABLISHED TECHNIQUES FOR FORMING, SEALING AND  
PROCESSING CERAMIC LASER HOUSINGS. WORKED ON ALIGNMENT OF  
ELECTRODES, MIRRORS AND ELECTRICAL CONNECTIONS. CO2 LASERS  
PROVIDE SMOKE PENETRATION, THERMAL IMAGE COMPATIBILITY +  
EYE SAFE OPERATION.

H 79 5000

PRODUCTION HOT FORGING OF ALKALI HALIDE LENSES

HIGHLY SUCCESSFUL PROCESSES FOR PRESSING IR LENSES TO SHAPE  
HAVE BEEN DEVELOPED BY HONEYWELL. A NOMINAL PRODUCTION RATE  
OF 100 LENSES PER SHIFT WAS ATTAINED. NO OPTICAL FINISHING  
WAS REQUIRED. A NEW TESTING METHOD ANALYZES THE LENS  
SURFACE.

F 79 5042

LARGE DIAMETER NEODYMIUM YAG LASER CRYSTAL BOULES

LITTON BUILT NEW STATIONS FOR GROWING 50MM DIAMETER ND-YAG  
BOULES BY THE CZOCHRALSKI METHOD. 30 RODS CUT FROM BOULES  
WERE TESTED BY GOVT AND FOUND ACCEPTABLE. ALL WORK  
COMPLETED EXCEPT FINAL REPORT. DEMO HELD MAR 83.  
APPLICATION IS AN/GVS-5.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

H 81 5110

COMMON MODULE DETECTOR ARRAYS

HONEYWELL IMPROVED YIELD OF DETECTOR ARRAYS FROM 1 TO 15 PCT + FROM 0 TO 4 BLANKS/DAY. THE MERC-CAD-TELLURIDE IS MADE INTO ARRAYS HAVING 60, 120 AND 180 ELEMENTS. COOLERS FROM 3 FIRMS WERE TESTED AND CHARACTERIZED FOR MICROPHONICS FROM VIBRATION.

H 80 9563

MINATURE HIGH VOLTAGE POWER SUPPLYS FOR NIGHT VISION GOGGLES

K+M DELIVERED THE PILOT RUN SAMPLES. AN END OF CONTRACT DEMONSTRATION WAS HELD JUNE 29, 1983.

H 80 9588

THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES

VARO DEMONSTRATED CAPABILITY TO BUILD TUBES WITH SPEC. PHOTOCATHODE SENSITIVITY, THAT ARE STABLE WHEN SUBJECTED TO HIGH LIGHT LEVELS + HIGH TEMPERATURES. ALL EFFORT HAS BEEN DISCONTINUED SINCE JAN 83. FINAL REPORT WAS ACCEPTED BY GOVT. IN JUL 83.

2 76 9766

DEPOSITION OF A HI VOLTAGE INSULATING LAYER FOR THICK FILMS

ERIE TECHS INABILITY TO PRODUCE HYBRID MULTIPLIER MODULES WAS RESOLVED WITH ALTERNATE DESIGN. FEWER PARTS HAS REDUCED COST. MODULES ARE BUILT + TESTED SEPARATELY PRIOR TO USE IN POWER SUPPLIES FOR IMAGE INTENSIFIER TUBES. FINAL REPORT IS APPROVED.

2 77 9809

MEAS TECHNIQ FOR CHMICALS IN MEG PROC FOR SOLID ST MICROWV

THE CORRELATION BETWEEN LEVEL OF CONTAMINANTS AND ELECTRICAL PERFORMANCE OF PIN DIODES WAS NOT DEMONSTRATED. THIS WAS PRIMARILY DUE TO INSUEFICIENT DATA BASE.

F 79 9844

CMOS CIRCUITS USING SILICON ON SAPPHIRE -SOS-TECHNOLOGY

ROCKWELL FOUND OPTIMUM EPITAXIAL GROWTH CONDITIONS FOR UNION CARBIDES REACTOR AND A FAST, PRODUCTION ORIENTED UV TEST FOR FILM QUALITY. CMOS-SOS LSI CIRCUITS WERE BUILT WITH GOOD 15-25 PERCENT YIELD. UV TEST OF FILM QUALITY IS A GOOD TEST.



FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

NLABS

Q 80 8063

IMPROVED METHODS OF MANUFACTURING BUTYL RUBBER HANDWEAR

IT WAS CONCLUDED THAT THE INJECTION MOLDING PROCESS COULD NOT BE APPLIED SUCCESSFULLY TO THE FABRICATION OF BUTYL RUBBER GLOVES. THE CONTRACT WAS CANCELLED, AND ALL WORK HAS BEEN TERMINATED.

Q 81 8063

IMPROVED METHODS OF MANUFACTURING BUTYL RUBBER HANDWEAR

IT WAS CONCLUDED THAT THE INJECTION MOLDING PROCESS COULD NOT BE APPLIED SUCCESSFULLY TO THE FABRICATION OF BUTYL RUBBER GLOVES. THE CONTRACT WAS CANCELLED, AND ALL WORK HAS BEEN TERMINATED.

C 79 8066

CONTINUOUS FILAMENT HELMET PREFORM

CONTRACT IS COMPLETED. THE PROPOSED NEW METHOD DID NOT PROVE SUCCESSFUL. THE MMT WORK IS COMPLETED AND NO FURTHER WORK IS PLANNED. A TECHNICAL REPORT WILL NOT BE PUBLISHED DUE TO THE PROPRIETARY NATURE OF THE WORK.

Q 80 8066

CONTINUOUS FILAMENT HELMET PREFORM

HELMETS TESTED MET THE V50 REQMTS OF 2000 FT/SEC, BUT BASED ON A CASUALTY REDUCTION POTENTIAL ANALYSIS PERFORMED AT NLABS THEY DO NOT COMPARE FAVORABLY TO THE STANDARD PASGT HELMET MOLDED WITH KEVLAR FABRIC. NO FURTHER WORK WILL BE DONE ON THIS MMT.

TECOM

C 78 5071 37

MILITARY VEHICLE ROLL OVER TESTS

\*SEE SUBTASK 37 FY83 FOR DATA\*

O 79 5071 37

MILITARY VEHICLE ROLL OVER TESTS

\*SEE SUBTASK 37 FY83 FOR DATA\*

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

O 79 5071 53

CERTIFICATION OF LOOSE CARGO BOUNCE TEST

SEE SUBTASK 53 FY81.

C 79 5071 54

ON-LINE SEMI CONDUCTOR TESTING IN NUCLEAR ENVIRONMENT

THE TASK HAS BEEN COMPLETED + THE FINAL RPT. APPROVED BY  
TECOM. THE TASK RESULTED IN DEVELOPING METHODS + PROCEDURES  
NECESSARY FOR REMOTE TESTING OF SEMI-CONDUCTORS IN A  
NUCLEAR ENVIRONMENT.

C 80 5071 14

SMOKE OBSCURATION TEST PROCEDURES

SEE SUBTASK 14 FY81.

C 80 5071 43

TEST AUTOMATION DEVELOPMENT

SEE INDIVIDUAL SUBTASK 43 FY83 FOR DATA.

O 80 5071 45

PROD/STAND OF SIZE MEAS F/AEROSOL CLOUD PARTICLES OF BIOLOGI

TRAINING OF PRINCIPAL RESEARCHER AT THE MFG. OF PIMC AUTO.  
PARTICLE ANALYZER WAS OBTAINED AT INITIATION OF THE STUDY.  
COMPARISONS BETWEEN VISUAL SIZING BY EITHER THE PORTION  
GRATICULE OR THE CURTAIN MICROMETER EYEPIECE + AUTOPARTICLE  
WAS DONE.

C 80 5071 46

FERMENTATION METHODOLOGY

SEE INFORMATION UNDER SUB-TASK 46 FY81.

C 80 5071 47

PROD/STAND OF ATTENUATED VEE VIRUS - TC-83 STRAIN

A PROCEDURE WAS DEVELOPED TO PRODUCE UNIFORM BATCHES OF  
TC83 VEE VIRAL SLURRIES. INFECTIVITY + STABILITY OF THE  
SLURRIES WERE DETERMINED OF BOTH STORED + FRESH MATERIAL  
THE EFFECT OF HUMIDITY + PARTICLE SIZE ON INFECTIVITY OF  
THE AEROSOL WAS DONE.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

- O 80 5071 57  
GENERAL PURPOSE BIT SLICE MICRO-COMPUTER  
SEE INDIVIDUAL SUBTASK 57 FY82.
- O 80 5071 58  
AIR VELOCITY INFLUENCES ON FUNGAL SPORE GERMINATION  
SEE SUBTASK 58 FY81.
- C 80 5071 59  
SOLAR POWERED INSTRUMENTATION VAN  
SEE SUBTASK 59 FY82.
- O 80 5071 60  
RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS  
SEE SUBTASK 60 FY83 FOR DATA.
- O 80 5071 65  
PRODUCTION/STANDARDIZATION OF COXIELLA BURNETII SLURRIES  
  
THE SUBTASK IS COMPLETE. A PROCEDURE WAS DEVELOPED FOR PRODUCTION OF UNIFORM BATCHES OF C. BURNETII. THE INFECTIVITY + STABILITY OF THESE BATCHES WAS CHECKED BEFORE + AFTER AEROSOLIZATION + FOUND TO BE SATISFACTORY.
- O 80 5071 67  
INTEROPERABILITY TEST METHODOLOGY  
SEE SUBTASK 67 FY83 FOR DATA.
- O 80 5071 71  
IMPROVED COPPER CRUSHER GAGE  
SEE SUBTASK 71 FY83 FOR DATA.

AVRADCOM

- 1 78 7036  
ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES  
  
WORK UNDER THIS PROJECT IS FINISHED. TECHNICAL REPORT HAS BEEN RECEIVED AND 302 HAS BEEN WRITTEN AND PUBLISHED.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

1 82 7113

COMPOSITE REAR FUSELAGE (CRF) MANUFACTURING TECHNOLOGY

ALL WORK HAS BEEN SUCCESSFULLY COMPLETED EXCEPT FOR THE FINAL TECHNICAL REPORT. THE GOVERNMENT/INDUSTRY BRIEFING WAS HELD. THE COST SAVINGS OF THE CRF ARE 38 PCT AND WEIGHT SAVINGS ARE 10 PCT. IMPLEMENTATION STEPS ARE BEING TAKEN.

1 77 7238

PRECISION FORGED ALUMINIUM POWDER METALLURGY

NO TECHNICAL WORK WAS CARRIED OUT DURING THIS REPORTING PERIOD AS THE CONTRACT HAS BEEN TERMINATED.

1 80 7285

CAST TITANIUM COMPRESSOR IMPELLERS

ALL WORK COMPLETED FOR THIS PROJECT.

1 81 7322

LOW COST TRANSPIRATION-COOLED COMBUSTOR LINER

ALL PLANNED WORK FOR THIS PROJECT IS COMPLETE.

1 81 7341

STRUCTURAL COMPOSITES FABRICATION GUIDE

ALL WORK HAS BEEN COMPLETED. THE PROJECT WORK HAS BEEN PUBLISHED AS THE THIRD EDITION OF THE COMPOSITES FABRICATION GUIDE. THE GUIDE IS IN THE PROCESS OF BEING DISTRIBUTED.

1 82 7389

PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS

PHASES 1 AND 2 ARE COMPLETE. THIS INCLUDES DESIGN CRITERIA, MATERIAL PROCESS CHARACTERIZATION, AND PRELIMINARY DESIGN REFINEMENT TRADE OFF STUDY. THIS IS THE FIRST PROJECT OF A THREE FY EFFORT.

MICOM

R 80 1018

IMPROVED MFG. PROCESSES FOR DRY TUNED ACCELEROMETERS (CAM)

ALL ASPECTS OF THIS PROGRAM HAVE BEEN SUCCESSFULLY COMPLETED. THE RESULTS HAVE BEEN IMPLEMENTED. THE SUSPENSION COST WAS REDUCED BY 72 PERCENT. THE PROGRAM WAS EXTREMELY SUCCESSFUL.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

3 82 1050

LOW COST BRAIDED ROCKET MOTOR COMPONENTS

AN END-OF-PROJECT DEMO WAS HELD AT CONTRACTOR FACILITY IN MAY 1983. A MOVIE COVERING PROJECT WORK WAS COMPLETED. THE FIRST YEAR OF PRODUCTION (FY84 FUNDING) WILL SUPPLY 5.25 INCH CASES AT RATES EXCEEDING 4000 PER MONTH. MDAC-TITUSVILLE IS PDN SITE.

3 81 1072

MULTIPLE HIGH RELIABILITY/LOW VOLUME LSI MANUFACTURING (CAM)

INSOUTH MICROSYSTEMS SURVEYED THE IC INDUSTRY, USED P + N PHOTORESIST AND ETCHING PROCESSES, USED MULTI-DOPANT SOURCES, DID DIFFUSION, OXIDATION, +VAPOR DEPOSITION. USED PROCESS CONTROL ON SEVERAL EQUIPMENTS. A VAX 11/780 WILL CONTROL THE PROCESSES.

3 81 1088

OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES

STRUCTURAL REQMTS FOR BOTH THE MET(NET) AND INFLATABLE REUSABLE CASE MANDRELS HAVE BEEN DETERMINED FROM SUBSCALE TESTING. THE MET FULL SCALE MANDREL HAS BEEN DESIGNED AND OPTIMIZED. PROBLEMS WITH OTHER FULL SCALE MANDREL MATLS LED TO DISCONTINUANCE.

R 80 3142

PRODUCTION METHODS FOR LOW COST PAPER MOTOR COMPONENTS

TECHNICAL EFFORT FOR THE OPTION PROGRAM IS COMPLETE. FINAL REPORT PREPARED AND ALL MOTOR HARDWARE DELIVERED. TECHNICAL REPORT TR-RK-CR-83-3 COMPLETED AND DISTRIBUTED. A MOVIE COVERING THE PROJECT HAS BEEN COMPLETED.

R 78 3218

REDUCE THE FINISHING COST OF FUSED SILICA RADOMES

THE FEASIBILITY OF PRODUCING PATRIOT SIZED RADOMES BY SLIP CASTING HAS BEEN DEMONSTRATED. THIS TECHNIQUE WOULD GREATLY REDUCE FINAL MACHINING COSTS SINCE THE BLANKS ARE NEAR NET SHAPE. IMPLEMENTATION IS PLANNED FOR THE PATRIOT MISSILE RADOME.

3 81 3423

LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES

PROJECT COMPLETE. INTERIM TECH REPORT RK-CR-83-2, 14 SEP 82, WAS DISTRIBUTED. WORK CONTINUES UNDER 3823423.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

TACOM

4 7T 4568

TECHNICAL DATA/CONFIGURATION MANAGEMENT SYSTEM (TD/CMS)

DATA WAS LOADED AND VERIFIED FOR FIFTEEN MAJOR VEHICLE SYSTEMS ON THE TACOM TD/CMS. COMPUTER SOFTWARE PROCEDURES WERE PREPARED AND TESTED. GOVT PERSONNEL WERE TRAINED FOR OPERATION OF THE TACOM TD/CMS. THE SYSTEM WAS IN FULL OPERATION IN AUG 80.

T 79 5002

FABRICATING TORSION SPRINGS FROM HIGH STRENGTH STEELS

THE FINAL TECHNICAL REPORT HAS BEEN RECEIVED AT IBEA AND THE 302 SUMMARY HAS BEEN DRAFTED.

T 82 5002

FABRICATION OF TORSION BARS FROM HIGH STRENGTH STEEL

THE FINAL TECHNICAL REPORT HAS BEEN RECEIVED AT IBEA AND THE 302 SUMMARY HAS BEEN DRAFTED.

T 80 5082

FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS

THIS PROJECT IS COMPLETE. A FMS HANDBOOK HAS BEEN PUBLISHED. SEE MMT PROJECT T 81 5082.

T 78 5085

PRODUCTION TECHNIQUES FOR FABRICATION OF TURBINE RECUPERATOR

WORK ON THIS PROJECT COMPLETED AWAITING TECHNICAL REPORT.

T 80 5085

TURBINE RECUPERATOR

ALL WORK IS COMPLETED ON THIS PROJECT AWAITING TECHNICAL REPORT.

T 81 5090

IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE III)

COORDINATED PROJECT WITH SHOULD COST TEAM. CONTACTED MFGS FOR DATA AND HELD MEETINGS TO DISTRIBUTE DATA FOR IMPLEMENTATION. RESOLVED PROBLEMS WITH CONTRACTOR AND COORDINATED EFFORTS WITH PMA.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

T 78 5097

INTEGRALLY CAST LOW COST COMPRESSOR (PHASE II)

ALL WORK COMPLETED ON THIS PROJECT INCLUDING FINAL  
TECHNICAL REPORT.

T 81 5097

INTEGRALLY CAST LOW COST COMPRESSOR (PHASE III)

ALL WORK COMPLETED ON THIS PROJECT INCLUDING FINAL  
TECHNICAL REPORT.

T 82 6025

LASER MANUFACTURING

PROBLEMS WERE ENCOUNTERED WITH GENERAL DYNAMICS LAND  
SYSTEMS DIVISION. AS A RESULT NO WORK WAS PERFORMED. THE  
FUNDS WILL BE RETURNED AND REPROGRAMMED.

T 82 6053

WELDING SYSTEMS INTEGRATION

PROJECT TERMINATED. FUNDS RE-PROGRAMMED TO MEET OTHER  
PROGRAM NEEDS.

T 81 6057

XM1 COMBAT VEHICLE

SEE SUBTASKS.

T 81 6057 03

AUTOMATED METALLIZING

GENERAL DYNAMICS HAS IMPROVED THE CURRENT METALLIZING  
PROCESS, THEREFORE THIS TASK IS NO LONGER COST EFFECTIVE  
AND THE TASK IS CANCELLED.

T 81 6057 05

MACHINE DIAGNOSTICS

FUNDS FOR THE FY81 PORTION OF THIS TASK HAVE BEEN USED FOR  
ADMINISTRATIVE PURPOSES AND THE TASK WILL CONTINUE WITH  
FY82 FUNDS.

T 81 6057 13

LASER CUTTING

FUNDS FOR THE FY81 PORTION OF THIS TASK HAVE BEEN USED FOR  
ADMINISTRATIVE PURPOSES AND THE TASK WILL CONTINUE WITH  
FY82 FUNDS.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

T 82 6078

AUTO DYNAMOMETER CONTROL F/STANDARDIZATION INSP TESTING

THIS FY82 PROJECT WAS FUNDED WITH MMT FUNDS. THE EFFORT, HOWEVER, HAS BEEN IDENTIFIED AS MACI AND FUTURE YEARS OF FUNDING ARE STATED AS BEING MACI. AS A RESULT THIS FY82 PROJECT WILL NO LONGER BE REPORTED UNDER THE MMT PROGRAM.

T 82 6107

IMPROVED MBT TRACK

PROJECT WORK, THE PREPARATION OF FOUR REQUESTS FOR PROCUREMENT, WAS COMPLETED. NO TECHNICAL WORK WAS ACCOMPLISHED.

AMCCOM (AMMO)

5 80 0900

AUTOMATED MULTIPLE FILTER LIFE TESTER

THE DESIGN CONCEPT OF THE AUTOMATED MULTIPLE FILTER LIFE TESTER WAS FINALIZED, REVIEWED AND ACCEPTED. LEVEL 1 DRAWINGS WERE REVIEWED AND ACCEPTED.

5 80 1001

PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES

PHASE I ENGINEERING STUDY WAS COMPLETED. PHASE II, TASK 1, DEVELOPMENT OF AN INVESTMENT CASTING METHOD AND MOLD FOR PRODUCING MAGNET KEEPERS WAS COMPLETED WITH AN ESTIMATED SAVINGS OF 56K PER MAGNET KEEPER PAIR. THE FINAL REPORT WAS APPROVED.

5 80 1003

LOW COST MOLDED PACKAGING FOR HYBRID ELECTRONICS

FINAL REPORT DRAFT WAS SUBMITTED TO HDL FOR REVIEW. CORRECTIONS AND CHANGES WERE MADE AND FINAL COPIES PRODUCED.

5 80 1005

CERAMIC-METAL SUBSTRATES FOR HYBRID ELECTRONICS

ALL PROJECT WORK IS COMPLETE. INDUSTRY DEMO WAS HELD AT WESTINGHOUSE DESC ON 30 SEPT 82. TECHNICAL REPORT AND HANDBOOK HAVE BEEN COMPLETED.



FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

5 79 1295

MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT

ORIGINAL DESIGN CONCEPT REWORKED TO COMPLY WITH NEW SAFETY REGULATIONS. LEVEL 1 DRAWINGS FOR CONSTRUCTION OF FACILITY WERE RECEIVED.

8 78 1335

MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK

THIS PROJECT HAS BEEN COMPLETED.

5 79 1335

MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK

THIS PROJECT HAS BEEN COMPLETED.

5 80 1335

MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK

THIS PROJECT HAS BEEN COMPLETED.

5 81 1335

MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK

INITIATED PILOT PROJECTION OF MASK COMPONENTS. FINAL MASK ASSEMBLIES BEING TESTED FOR LEAKAGE AND RESISTANCE. LENS BONDING EQUIPMENT INSTALLED. INITIAL LENS ASSEMBLIES FAILED THE TEST. ADDITIONAL FABRICATIONS PASSED THE TESTS.

5 82 1335

MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK

PHYSICAL CONFIGURATION AUDIT IS COMPLETE. TDP BEING UPDATED TO INCORPORATE RESULTS.

5 79 3961

IMPROVED 3-D VIBRATION ACCEPTANCE TEST FOR ART FUZES

PROJ WAS COMPLETED IN DEC 81. THE DESIGN AND ENGINEERING TDP FOR THE 3D-VTS HAS BEEN DELIVERED TO HDL. SUFFICIENT DEFINITION EXISTS TO COMMENCE PROCUREMENT OF REMAINING SUBSYSTEMS. VALIDATION OF TDP WILL BE ACCOMPLISHED AS PART OF THE FY81 PROJECT.

5 80 3961

IMPR (3-D) VIB ACCEPT TSTNG F ART FUZES AND S/A MECHANISMS

THIS PROJECT IS PHASE 2 OF A 3 PHASE EFFORT. PHASE 2 IS COMPLETE. SEE MMT PROJECT 5 81 3961 FOR EFFORT STATUS.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

5 80 4037

PROCESS IMPROVEMENT FOR PLASTIC-BONDED EXPLOSIVES

WATER SLURRY TECHNIQUES WERE DEVELOPED FOR THE FORMULATION OF PBXC117 AND PBX W109 PRECOATS. A DIRECT COATING PROCESS FOR PRODUCTION OF PBX-0280 AND LX-14-0 WAS DEVELOPED. A TECH REPORT DESCRIBING THE RESULTS WAS COMPLETED.

5 81 4059

CONTROL OF NQ CRYSTALLIZATION

AN INVESTIGATION OF THE AGGLOMERATION OF NQ WAS CONDUCTED INCLUDING THE EFFECTS OF HUMIDITY, ADDITIVES, AND COATINGS ON CHANGES IN SPECIFIC SURFACE WITH TIME. AGGLOMERATION CAN BE PREVENTED BY CONTROLLING HUMIDITY AND USE OF HYDROPHOBIC COATINGS.

5 81 4062

AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS

THE TASKS ADDRESSED BY THE FY 81 PROJECT WERE COMPLETED SATISFACTORILY. A TWO STEP HOT FORMING PAPER MULLING WAS DEVELOPED. IN ADDITION, ARRANGEMENTS WERE FINALIZED WITH ARMTEC DEF. PROD. TO INSTALL + FINAL ACC. TEST THE PROTOTYPE SLURRY FORMING.

5 81 4062 01

SLURRY VACUUM FORMING MFG SYS

THE ORIGINAL DESIGN CONTRACT WAS AMENDED ON 1 MAY 81 FOR FAB. + ASSY OF MODULE I, THE CONTAINER HALF FORMING MACHINE, MODULE II, THE HOLE PUNCH + TRIM MACHINE. THE FAB. + ASSY EFFORT AT ESD CORP. WAS ACCOMPLISHED WITH NO TECH. PROBLEMS.

5 81 4062 03

ASSEMBLY SYSTEM

THE ORIGINAL DESIGN CONTRACT AMENDED ON 22 SEPT. 81 FOR THE FAB., ASSY + DEBUGGING OF THE ASSEMBLY SYS. CONSISTING OF FIVE STATIONS. THE PHASE II EFFORT WAS EXPANDED ON 7 JUN 82 TO DEVELOP A TRANSLUCENCY INSPECTION DEVICE + A THERMAL LEAK DET. GAUGE.

5 81 4062 04

SLURRY VACUUM FORMING OPTIMIZATION

IN SUPPORT OF THE SLURRY VACUUM FORMING BASE MFG. SYS. BEING DEVELOPED UNDER CONTRACT WITH ESD CORP. + TO INVESTIGATE WAYS TO IMP ROVE THE BASIC SLURRY PROCESS, A CONTRACT WAS AWARDED ON 15 APR. 81 TO EXECUTE PROCESS STUDIES.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

5 81 4062 05

PAPER MOLDING OPTIMIZATION

A COMPREHENSIVE PAPER MOLDING PRODUCTION PROCESS OPTIMIZATION PROGRAM WAS PERFORMED BY THE CONTRACTOR TO IMPROVE THE BASIC PAPER MOLDING PROCESS. THIS PROGRAM DEVELOPED A PROCESS THAT ELIMINATED THE USE OF WETTING AGENTS + THE DRYING REQUIREMENT.

5 78 4139

APPL OF RADAR TO BALLIST ACCEPTANCE TESTING OF AMMO-ARBAT

THIS PROGRAM IS COMPLETE. ARBAT IS BEING RETROFITTED TO IMPROVE SYSTEM RELIABILITY AND ACCURACY. ARBAT PROVIDES CAPABILITIES NOT AVAILABLE IN OTHER RADAR SYSTEMS.

5 79 4139

APPL OF RADAR TO BALLIST ACCEPTANCE TESTING OF AMMU-ARBAT

THIS PROGRAM IS COMPLETE. ARBAT CAN PROVIDE ACCURATE RETRIEVABLE DATA, ANALYSIS IS TIMELY AND AUTOMATIC AND MEANINGFUL. A RETROFIT PROGRAM IS ON GOING TO IMPROVE RELIABILITY AND ACCURACY REQUIREMENTS.

5 78 4150

NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION

PROTOTYPE TOOLS WERE DEVELOPED FOR COLD FORMING OF THE XM777 STEEL PENETRATOR. DEVELOPMENT AND DEMONSTRATION OF PROTOTYPE SKEWED AXIS ROLL FORMING EQUIPMENT WAS ALSO ACCOMPLISHED. A PROCESS STUDY OF BULLET MANUFACTURE WAS COMPLETED.

5 79 4150

NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS

A PROTOTYPE CONFIGURATION FOR INCORPORATING THE PENETRATOR FEEDING, INSERTING AND FEEDING INTO THE BULLET ASSEMBLY PROCESS WAS EVALUATED AND A FINAL CONFIGURATION SELECTED. THE PROTOTYPE WILL BE DEVELOPED AS A DUPLEX MACHINE CONFIGURATION.

5 81 4225

RED WATER POLLUTION ABATEMENT SYSTEM

DESIGN CRITERIA FROM EVALUATION OF SOLID BOWL CENTRIFUGE, ASH OXIDIZER, FLUE GAS AFTERBURNER, PARTICULATE SCRUBBER AND SO2 ABSORBER HAVE BEEN INCORPORATED INTO THE PDB FOR THE MCA FACILITY AT RADFORD AAP. THIS PROJECT IS COMPLETED.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

5 81 4288

EXPLOSIVE SAFE SEPARATION AND SENSITIVITY CRITERIA

ALL PLANNED SAFE SEPARATION STUDIES HAVE BEEN COMPLETED.  
FRAGMENT IMPACT STUDIES AND EXPLOSIVE DUST STUDIES HAVE  
BEEN COMPLETED AND FINAL REPORTS ARE BEING REVISED.

5 81 4364

ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS

A CONTRACT WAS LET FOR THE CALIBRATION OF THE BIOLOGICAL  
MONITORING FACILITY TO THE WASTEWATER STREAMS FROM THE  
COLLECTED WASTEWATER SYSTEM AND THE CENTRAL WASTEWATER  
TREATMENT FACILITY. VENTILATORY RATE CHANGE OF BLUEGILL WAS  
CHOSEN F/MONITORING.

5 81 4553

PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS

PROJECT CANCELLED BY SARPM-PBM-MM BY LETTER DATED 2 MAY 83,  
DUE TO SIGNIFICANT SCHEDULE SLIPPAGE, CAUSED BY DELAYS IN  
MSAAP FORGE SHOP BECOMING OPERATIONAL.

5 82 4553

PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS

PROJECT CANCELLED BY SARPM-PBM-MM BY LETTER DATED 2 MAY 83,  
DUE TO SIGNIFICANT SCHEDULE SLIPPAGE, CAUSED BY DELAYS IN  
MSAAP FORGE SHOP BECOMING OPERATIONAL.

5 82 4558

THERMAL DEHYDRATION PROCESS SAFETY AND OPERATIONAL REDESIGN

INVESTIGATIONS OF THE THERMAL DEHY OF NC FOUND THAT THE  
UNIT COULD BE SAFELY OPERATED IF PROPER SAFETY MEASURES  
WERE TAKEN AND ADHERED TO.

5 7T 6494

NEW CONCEPTS FOR MFR AND INSPECT OF 20MM 25MM 30MM AMMO

SEE PROJECT 5 77 6494 FOR STATUS.

5 75 6494

MANUFACTURE AND INSPECTION OF CAL.50, 20MM, AND 30MM AMMO

SEE PROJECT 5 77 6494 FOR STATUS.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

5 76 6494

MANUFACTURE AND INSPECTION OF CAL.50, 20MM, AND 30MM AMMO

SEE PROJECT 5 77 6494 FOR STATUS.

5 77 6494

NEW CONCEPTS FOR MFR AND INSPECT OF 20MM 25MM 30MM AMMO

PROTOTYPE MACHINES WERE DESIGNED AND MAJOR PORTIONS  
FABRICATED FOR PRODUCING 20MM AMMUNITION. THE 20MM  
REQUIREMENTS DROPPED DRAMATICALLY. STUDIES WERE MADE TO SEE  
IF THE EQUIPMENT COULD BE CONVERTED TO PRODUCE OTHER  
ROUNDS. PROJECT WAS TERMINATED.

5 79 6634

MFG DU ALLOYS FOR LARGE CALIBER ARMOR DEFEATING PROJECTILE

FINAL REPORT IS IN PROCESS OF BEING REVIEWED. EFFORT BEING  
CONTINUED UNDER 5 83 4563, TASK 6.

AMCCOM (WPNS)

6 80 7985

SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY

TECHNICAL REPORT RECEIVED. 302 REPORT AND ACCOMPLISHMENT  
CHART PREPARED.

6 80 8004

CU-DEPOSITION OF SOLID LUBRICANTS DURING ANODIZING

WORK IS COMPLETE. THE TECHNICAL REPORT IS IN THE FINAL  
DRAFT FORM. FINAL PUBLICATION IS FORECAST FOR DECEMBER  
1983.

6 81 8113

ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS

ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS.  
SELECT ARMAMENT COMPONENTS WERE COATED BY THE ION VAPOR  
DEPOSITION PROCESS. COATED ITEMS HAVE BEEN EVALUATED. A  
TECHNICAL REPORT IS BEING PREPARED.

6 81 8165

STANDARDS FOR DIAMOND TURNED OPTICAL PARTS

FABRICATION OF OPTICAL STANDARDS HAVE BEEN COMPLETED. TOTAL  
INTEGRATED SCATTER TECHNIQUE HAS BEEN DEMONSTRATED ON A  
LABORATORY SYSTEM USING OPTICAL STNDS. RESULTS WERE  
COMPARED WITH NBS PROFILOMETRY TECHNIQUES REVIEW IN  
PROGRESS FOR THE TEST DATA.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY83  
(CONTINUED)

6 81 8341

HOLLOW CYLINDER CUT OFF MACHINE

WORK HAS BEEN COMPLETED AND A FINAL TECHNICAL REPORT HAS BEEN PREPARED. AS A RESULT OF THE EXECUTION OF THIS PROJECT, A PERFORMANCE PROCUREMENT SPECIFICATION HAS BEEN PREPARED.

TOTAL PROJECTS COMPLETED IN 1ST HALF, CY83      78

MMT PROGRAM  
SUMMARY PROJECT STATUS REPORT

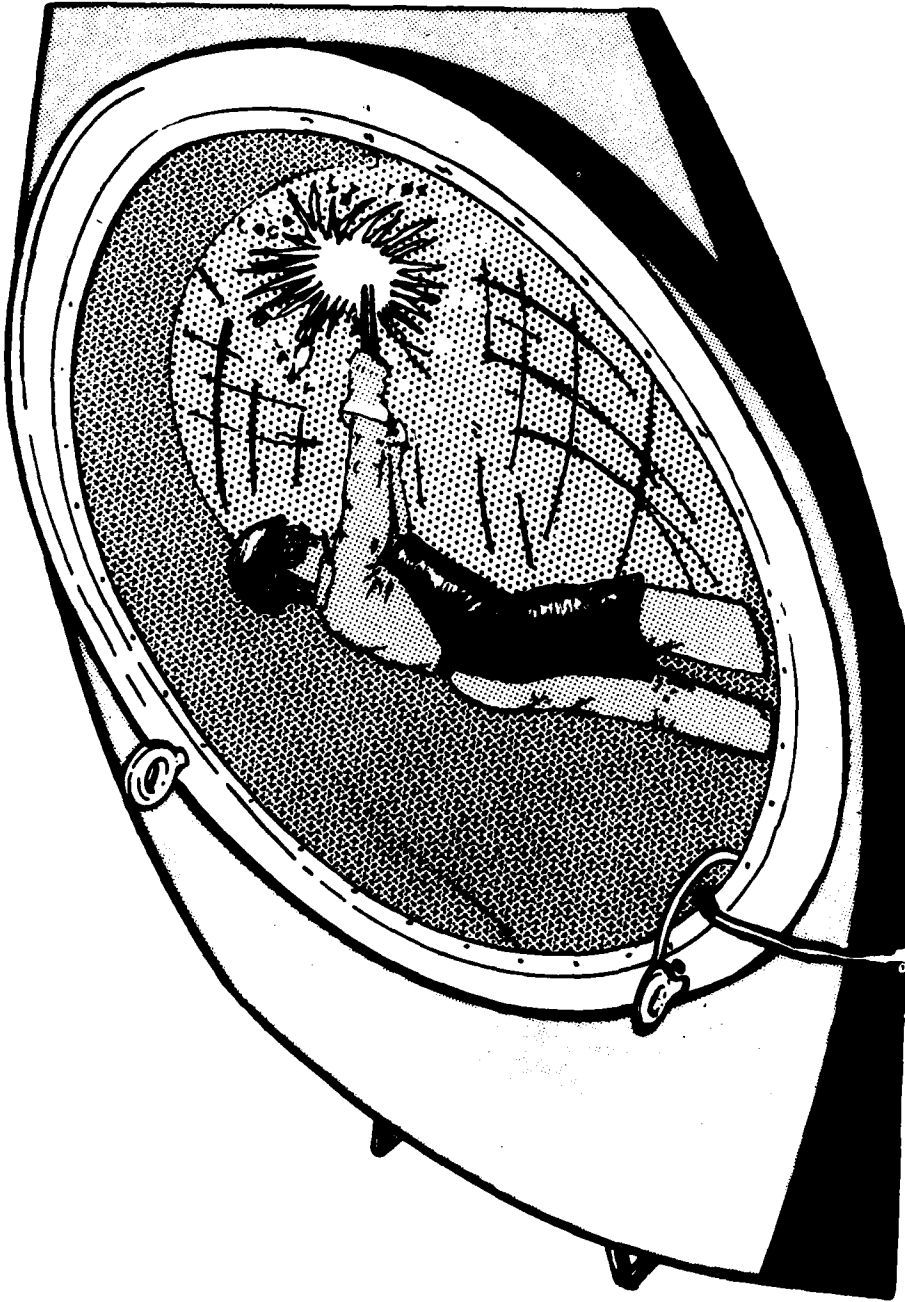


## MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

### SUMMARY PROJECT STATUS REPORT

The Summary Project Status Report for each major Army subcommand (SUBMACOM) is preceded by the tabulated SUBMACOM MMT project funding status. The accuracy of funding amounts is based on the individual project status reports. The status as reported here is the IBEA condensation of information contained in the report or other comments as deemed useful. If a status report was not provided, a pertinent comment was made so that the project would be printed.





**DEPOT SYSTEMS COMMAND  
(DESCOM)  
AND  
MANAGEMENT ENGINEERING TRAINING ACTIVITY  
(AMETA)**

**CURRENT FUNDING STATUS, 1ST CY83**

AUTHORIZED FUNDING	CONTRACT ALLOCATED	74%	INHOUSE REMAINING	26%
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MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
SUMMARY PROJECT STATUS REPORT  
1ST SEMIANNUAL SUBMISSION CY 83 RCS DRCHT-301

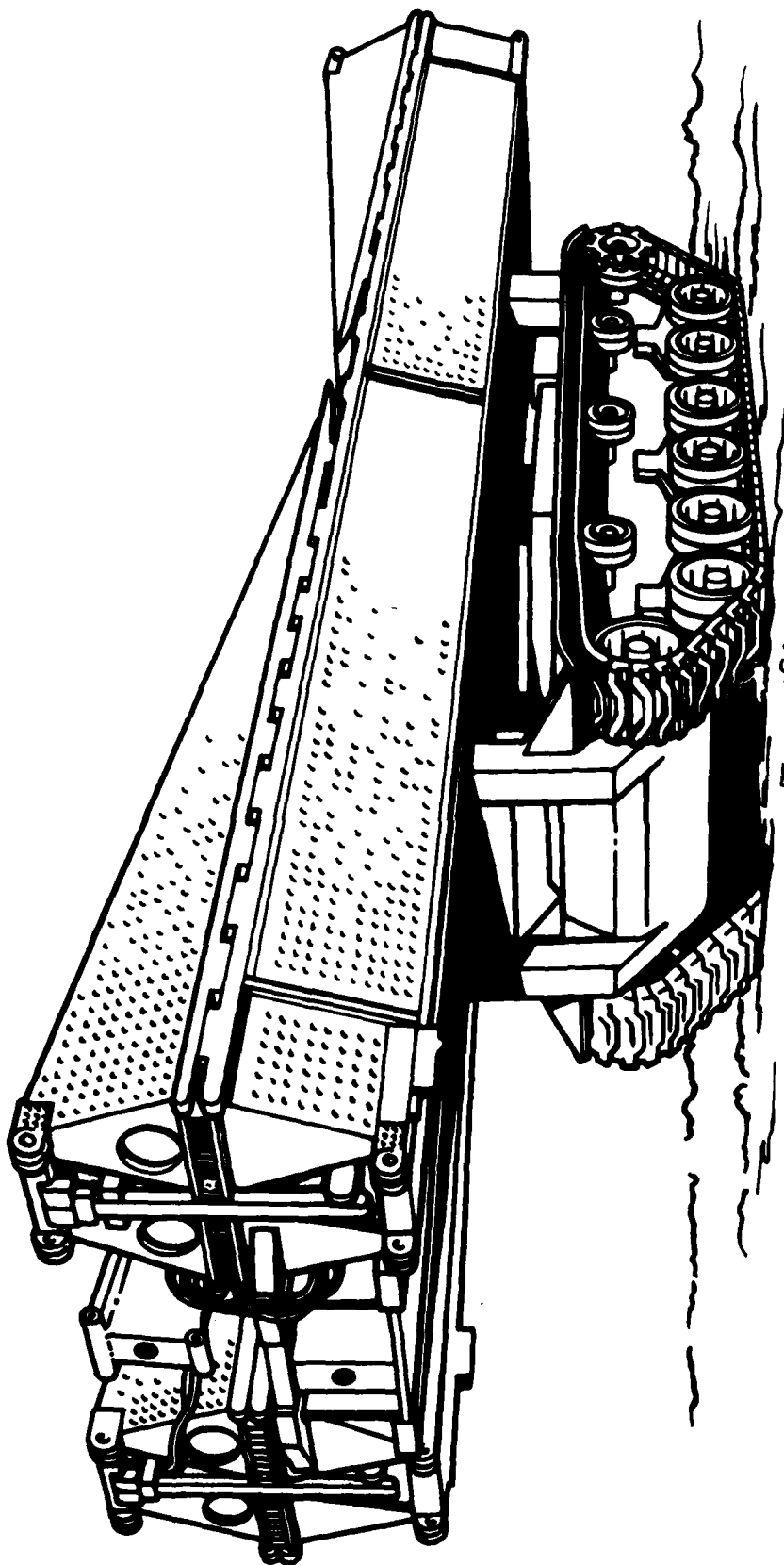
PROJ NO. TITLE + STATUS

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 7T 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT CONTINUED WORK ON MANUALS NUMBERED 706-100, 706-158 + 159, 706-199 PART 5. EXPECT TO HAVE 706-199, 158 + 159 BY THE END OF CY83.	383.0	383.0		JUN 78	DEC 83
D 78 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT WORK ON 706-203 HAS BEEN DELAYED DUE TO DIFFICULTY IN FINDING A SUITABLE CONTRACTOR. WORK ON 706-475 DELAYED AT DIRECTION OF HQ DARCOM TO PERMIT AUTHOR WORK ON 706-199 WHICH HAS HIGHER PRIORITY.	870.0	743.0	127.0	NOV 79	FEB 82
D 79 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-203 HAS BEEN DELAYED DUE TO PROBLEMS ASSOCIATED WITH FINDING A CONTRACTOR. WORK ON 706-475 DELAYED AT DIRECTION OF HQ DARCOM TO PERMIT AUTHOR WORK ON 706-199 WHICH HAS HIGHER PRIORITY.	495.0	387.8	107.2	MAY 83	MAY 83
D 80 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-480 PRELIMINARY FINAL DRAFT MANUSCRIPT CONTD. WORK ON 706-177 FINAL DRAFT MANUSCRIPT CONTINUING AT ARRADCOM. DELAYS EXPERIENCED IN GETTING TECHNICAL WORK GROUPS TO FINALIZE OUTLINE FOR 706-123, 706-210, AND 706-XXX.	460.0	432.0	28.0	JAN 83	JAN 83
D 81 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. DELAY EXPERIENCED IN GETTING TECHNICAL WORK GROUP TO FINALIZE REVISED OUTLINE FOR 706-245.	531.0	392.0	37.5	JAN 84	JAN 84
D 82 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. TECHNICAL WORKING GROUPS (TWG) BEING FORMED FOR 706-160, 170 AND 410. SYNOPSIS OUTLINE PREPARED ON 706-120.	580.0	542.0	25.6	SEP 83	SEP 83
D 83 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON 706-630 WHICH WAS STARTED WITH PRIOR YEAR FUNDS.	120.0	10.0		DEC 83	DEC 83

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PRJ NO. TITLE + STATUS

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G 83 0002	CAM APPLICATION OF ROBOTICS TO SHELTER REFINISHING NO FURTHER PROGRESS WAS ACCOMPLISHED DURING THIS REPORTING PERIOD.	50.0			NOV 84	NOV 84
G 82 2001	PROVIDE PROTOTYPE ROBOTS FOR AUTOMATED BLAST CLEANING A THIRD DRAFT SOW INCORPORATING A PORTION OF THE REMARKS AND COMMENTS FURNISHED BY MBHM AGENCY 16 FEB 83, WAS SUBMITTED TO QUALITY DIRECTORATE OF LEAD FOR REVIEW. ALSO THE SOURCE SELECTION BOARD IS COMPLETE.	162.0		16.0	SEP 84	SEP 84
G 82 2002	LONG RANGE DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM THE STATEMENT OF WORK WAS FURTHER REVIEWED BY DESCOM AND IS BEING REWRITTEN IN A MORE TASK ORIENTED SEQUENCE.	100.0		39.0		SEP 83
G 81 4002	ROBOTIZED WELDING OF M13A2 SUSPENSION CONTRACT AWARDED TO KOHL SYSTEMS INC. A CODE H HULL IS MACHINED AWAITING SHIPPING INSTRUCTIONS. AREA LAYOUTS HAVE BEEN MADE.	421.0	415.0	1.3	SEP 81	AUG 84
G 82 4002	ROBOTIZED WELDING OF M13A2 SUSPENSION CONTRACT AWARDED TO KOHL SYSTEMS INC. A CODE H HULL IS MACHINED AWAITING SHIPPING INSTRUCTIONS. AREA LAYOUTS HAVE BEEN MADE.	74.0	44.0		AUG 84	AUG 84
G 82 4004	AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK A TWO-STEP RFP WAS RELEASED BY PROCUREMENT. THE SECOND STEP RESPONSE IS DUE MID JULY 1983.	299.0		0.1	SEP 83	OCT 84
G 81 4005	WATER JET MATERIAL REMOVAL SYSTEM CONTRACT WAS AWARDED TO DAEDALEAN, INC. SYSTEM HAS BEEN FABRICATED AND IS BEING DEBUGGED BY CONTRACTOR.	125.0	120.0	3.0	MAR 82	DEC 83
G 82 4005	WATER JET MATERIAL REMOVAL SYSTEM PHASE II CONTRACT WAS AWARDED TO DAEDALEAN, INC. SYSTEM HAS BEEN FABRICATED AND IS BEING DEBUGGED BY CONTRACTOR.	200.0	184.3	4.6	DEC 83	DEC 83
G 83 7001	AUTO DYNAMOMETER CONTROL F/STANDARDIZED INSPECT TEST (CAM) --- JUST FUNDED. NO 301 REQUIRED. ---					
G 82 8001	ANNISTON PRODUCTIVITY IMPROVEMENT PROGRAM A STATEMENT OF WORK IS BEING DEVELOPED IN PREPARATION OF A CONTRACT AWARD. WORK ON THIS PROJECT IS BEING SUSPENDED UNTIL FOLLOW-ON FUNDING IS APPROVED.	100.0		100.0	SEP 83	SEP 83



**MOBILITY EQUIPMENT  
RESEARCH AND DEVELOPMENT COMMAND  
(MERADCOM)**

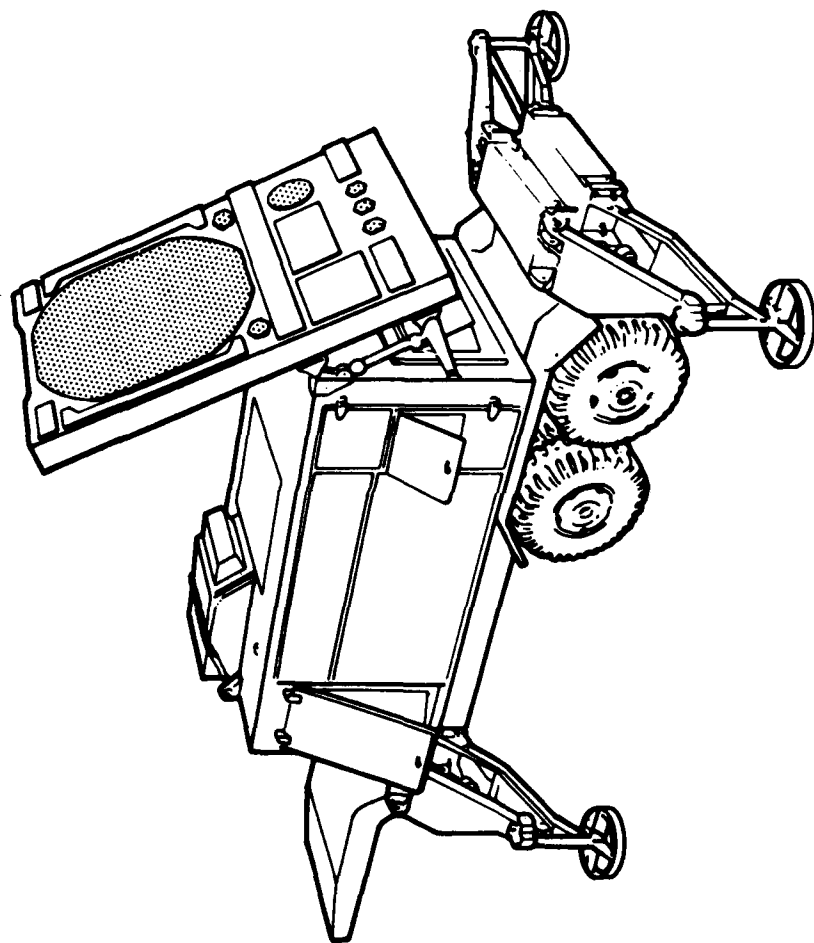
# MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND

## CURRENT FUNDING STATUS, 1ST CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	* * C O N T R A C T ( \$ ) A L L O C A T E D ( \$ )	* * F U N D I N G ( \$ ) E X P E N D E D ( \$ )	* * I N H O U S E ( \$ ) R E M A I N I N G ( \$ )	* * F U N D I N G ( \$ ) E X P E N D E D ( \$ )
79	2	1,690,000	1,575,000	1,575,000 (100%)	115,000	69,000 ( 60%)
80	2	286,500	27,200	27,200 (100%)	259,300	72,800 ( 28%)
81	3	735,000	607,000	595,000 ( 98%)	128,000	115,000 ( 89%)
82	2	1,107,600	997,300	538,600 ( 54%)	110,300	82,400 ( 74%)
83	0	0	0	0 ( 0%)	0	0 ( 0%)
TOTAL	9	3,819,100	3,206,500	2,735,800 ( 85%)	612,600	339,200 ( 55%)
AUTHORIZED FUNDING			CONTRACT ALLOCATED 84%		INHOUSE REMAINING 16%	

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E 79 3532	MOLTEN SALT LITHIUM-CHLORIDE BATTERY FIVE PROTOTYPE CELLS FOR A 30-CELL, 24KWH, 36V MOLTEN SALT LITHIUM-ALUMINUM/IRON SULFIDE BATTERY HAVE NOW BEEN CYCLED FOR 730 CYCLES. TWO SERIES CHAINS OF 15 CELLS PLACED ON LIFE CYCLE TEST. TWO CELLS LEAKED AFTER ONLY 12 CYCLES AND UNDER INVESTIGATION	295.0	280.0	15.0	AUG 80	SEP 83
E 82 3592	IMPROVED GRAPHITE REINFORCEMENT THE CARBONIZATION STEP + PRE-GRAPHITIZATION STEP WERE OPTIMIZED. A HEATING RATE OF 400 C PRODUCED THE HIGHEST STRENGTH + MODULUS AND THE OPTIMUM GRAPHITIZATION TEMPERATURE WAS FOUND TO BE 1400 C.	257.0	231.5	12.0	SEP 84	SEP 84
E 80 3708	COATED FABRIC COLLAPSIBLE FUEL TANK PROGRAM - CIRCULAR SEALM TEST AND EVALUATION PROGRAM INITIATED AT YPG ON 2 PROTOTYPE SEAMLESS TANKS. ONE TANK FILLED WITH FUEL/H2O MIXTURE AND OTHER ONLY H2O. AFTER 6 MONTHS BOTH TANKS ARE IN EXCELLENT CONDITION WITH NO SIGNS OF DETERIORATION OF THE COATED FABRICS.	107.5	27.2	72.8	SEP 81	SEP 83
E 80 3709	CONTINUOUS LENGTH FUEL NOSE RETURNED THIS STATUS REPORT TO THE COMMAND FOR CLARIFICATION IN FUNDING AND WORK ACCOMPLISHED.	179.0			SEP 83	DEC 83
E 81 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 10 KW POWER UNIT ENGINE TESTING OF CERAMIC NOZZLE ASSEMBLIES WAS INITIATED. FIFTY HOURS OF OPERATION WAS ACCUMULATED ON THE FIRST NOZZLE ASSEMBLY.	422.0	322.0	100.0	APR 82	SEP 83
E 79 3743	COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES TECHNICAL WORK HAS BEEN COMPLETED. THE TOTAL EFFORT CONTINUES AS PROJECT E813743. AN INTERIM TECHNICAL REPORT WAS NOT PROVIDED FOR THE 1979 FISCAL YEAR PROJECT.	1,395.0	1,295.0	54.0	SEP 80	SEP 82
E 81 3743	COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES PROJECT COMPLETE. STRUCTURAL BEAM ELEMENTS HAVE BEEN PRODUCED USING WINDING TECHNIQUES. METHODS FOR MASS PRODUCING COMPLEX PIN JOINTS HAVE BEEN DEVELOPED AND DEMONSTRATED. THE FINAL TECH REPORT DETAILING THE PROCESS HAS BEEN PREPARED.	100.0	87.0		JAN 82	AUG 83
E 81 3759	KEVLAR CABLE REINFORCEMENT FOR MILITARY BRIDGES THIS EFFORT IS COMPLETE. IT ESTABLISHED A CONTINUOUS TAPE LAY-UP METHOD SUITABLE FOR PROD OF VARIOUS WIDTH, LENGTH OR LOAD CAPACITY TENSILE ELEMENTS. 45 ELEMENTS WERE TESTED STATISTICALLY + DYNAMICALLY WITH COMPLETE SATISFACTION.	213.0	198.0	15.0	MAY 82	JUN 83
E 82 3796	COMBAT VEHICLE DEGAUSSING MAGNETIC SIGNATURE DATA HAS BEEN TAKEN FOR THE M1 AND M60 TANKS. MATERIAL SAMPLES HAVE BEEN GIVEN TO THE CONTRACTOR. DATA INDICATES THAT THE APPROACH USED BY THE NAVY FOR SHIPS AND SUBMARINES WILL BE VALID - " THE LAND VEHICLES. PROJ IS ON SCHEDULE.	850.6	765.8	70.4	AUG 83	DEC 85



**ELECTRONICS  
RESEARCH AND DEVELOPMENT COMMAND  
(ERADCOM)**



## ELECTRONICS R + D COMMAND

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	* * C O N T R A C T F U N D I N G A L L O C A T E D (\$)	* * E X P E N D E D (\$)	* * I N H O U S E F U N D I N G R E M A I N I N G (\$)	* * E X P E N D E D (\$)
76	1	2489800	247,000	247,000 (100%)	1,800	0 ( 0%)
77	0	0	0	0 ( 0%)	0	0 ( 0%)
77	3	3,031,800	2,868,800	2,766,700 ( 96%)	163,000	163,000 (100%)
78	3	2,960,800	2,704,000	2,497,500 ( 92%)	256,800	283,800 (110%)
79	4	2,366,400	2,177,800	1,679,000 ( 77%)	188,600	188,500 ( 99%)
80	6	4,144,000	3,145,000	2,514,500 ( 79%)	999,000	881,200 ( 88%)
81	6	3,601,700	3,280,800	3,060,100 ( 93%)	320,900	247,700 ( 77%)
82	8	4,876,100	4,351,200	1,466,200 ( 33%)	524,900	151,200 ( 28%)
83	11	5,123,500	2,136,500	0 ( 0%)	2,987,000	72,900 ( 2%)
TOTAL	42	26,353,100	20,911,100	14,231,000 ( 68%)	5,442,000	1,988,300 ( 36%)

**INHOUSE REMAINING 20%**

**CONTRACT ALLOCATED 79%**

**AUTHORIZED FUNDING**

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PROJ NO. TITLE + STATUS

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H 80 3010	MILLIMETER-WAVE SOURCES FOR 60, 94, AND 140 GHZ ANALYSIS OF PILOT PRODUCTION RUN OF 14 LOTS OF D-BAND, V-BAND AND W-BAND SILICON IMPATTIS INDICATE AN OVERALL YIELD OF 25 PCT. DIODE COST IS REDUCED FROM \$400 TO \$60. MMT MODULATOR IS UNSTABLE. TRW MODULATOR WILL BE USED INSTEAD.	1,065.3	997.3	66.0	JUL 82	DEC 83
H 83 3010	HYBRID MODULATOR FOR PULSED IMPATT MILLIMETER WAVE SOURCES TRW'S INHOUSE MODULATOR DESIGN IS IN THE BREADBOARD STAGE. A PRODUCTIONIZED VERSION WILL BE DEVELOPED. FOUR WAFERS WERE PROCESSED IN JANUARY WITH EQUIPMENT AND PROCESSES DEVELOPED IN PHASE I. THE IMPATTIS ARE BEING PACKAGED.	572.0	492.0		SEP 84	SEP 84
H 82 3011	INDIUM-PHOSPHIDE GUNN DEVICES THE TWO EPI LAYER PROCESS YIELD IS 90 PERCENT. ALTHOUGH PROCESS PROBLEMS STILL EXIST, THE IMP GUNN DIODES ARE SURPASSING THE REQUIREMENTS OF THE MMT AT 56 AND 94 GHZ. THE THINNED INTEGRAL HEAT SINK IS STILL PROBLEMATIC.	1,227.1	1,118.1	46.8	AUG 84	NOV 84
H 80 3023	TUBULAR PLASMA PANEL AN INDUSTRY DEMONSTRATION OF THE MANUFACTURING FACILITY WAS HELD IN JUNE. A MD-COST EXTENSION OF ONE YEAR WAS GRANTED TO NORDEN. AT THAT TIME NORDEN WILL DELIVER A MIFASS PANEL FOR USE IN A DISPLAY SIMULATOR.	800.0	674.0	95.0	APR 82	JUN 83
H 80 3026	HIGH PRESSURE OXIDE IC PROCESS THE REVISION OF THE FURNACE IMPROVED PERFORMANCE AT LOW PRESSURE/HIGH TEMPERATURE. AT 1000 P.S.I., CONVECTIVE HEAT LOSS PREVENTED ATTAINMENT OF 750 DEG. C. AUTOCALVE ENGINEERS INC. HAD \$446K OVERRUN. THEY WILL NOW STUDY REQUIREMENTS TO COMPLETE.	650.0		565.6	MAY 82	OCT 83
H 80 3501	THIRD GENERATION PHOTOCATHODE ON FIBER OPTIC FACEPLATE ITT ROADKOE IS REEVALUATING PROCESSING PROCEDURES BECAUSE OF COSMETIC DISCREPANCIES ON 25MM 0.9 MICRON 3RD GEN PHOTOCATHODES ON FIBER OPTIC FACEPLATES. BONDING PROBLEMS WERE RESOLVED. MAY GO TO METAL ORGANIC VAPOR PHASE EPITAXY GROWTH.	572.4	492.4	87.6	MAR 82	DEC 83
H 81 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING HUGHES HAS DELIVERED CONFIRMATORY SAMPLES INCLUDING ONE OPERABLE CRT AND SEVERAL MULTI-PHOSPHOR FACEPLATES. COMPLETION OF FABRICATION FACILITIES IN COMPLIANCE WITH OSHA STDS HAS RESULTED IN UNANTICIPATED EXPENDITURES.	375.6	349.6	0.8	OCT 82	SEP 84
H 82 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING - PHASE II ADDITIONAL CONFIRMATORY CRTS ARE COMPLETE UNDER PHASE I. DESCOPIING PHASE I FOR CONFIRMATORY CRT SAMPLES IS BEING DISCUSSED WITH PROCUREMENT. EFFORT ON PHASE II IS CURRENTLY LOW LEVEL.	260.8	229.8	50.5	JUN 83	MAR 84

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H 82 5010	BONDED GRID ELECTRON GUN BORON NITRIDE GRID BLOCKS FROM UNION CARBIDE HAD WRONG CURVATURE RADIUS. THEY ARE MAKING ANOTHER LOT. EXPERIMENTS FOR ATTACHING GRID BLOCKS TO CATHODE ARE ON-GOING. J.K.-LASERS IS EXPERIMENTING WITH THE REQUIRED LASER MILLING. ENG SAMPLES BY SEPT 83.	852.5	763.7	16.3	MAR 84	APR 85
H 82 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES 15 S-BAND AND 15 C-BAND ANODE CIRCUITS HAVE BEEN FABRICATED AND SUCCESSFULLY PASSED TESTING. COPPER-TUNGSTEN GROUND PLANE THERMAL EXPANSION PROBLEM WAS ANALYZED METALLURGICALLY AND SOLVED. LASER SERVICES INC USES WELL KNOWN CO2 LASER CUTTING ON BED.	441.0	390.6		MAR 83	OCT 83
H 83 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES PHASE II OBJECTIVE IS TO INCORPORATE THE NEW ANODE CIRCUIT INTO CFA TUBES. CONFIRMATORY SAMPLES OF 2 C-BAND CFA AND 2 S-BAND CFA WILL BE DELIVERED.	408.0	369.0		NOV 84	NOV 84
H 81 5041	MILLIMETER WAVE MIXERS AND ARRAYS THE CONTRACT HAS BEEN DESIGNED TO DELETE THE 140 GHZ MIXER BECAUSE OF UNRESOLVABLE PROBLEMS. TEN EACH OF PILOT RUN SAMPLES AT 56 AND 94 GHZ WILL BE DELIVERED. THIS MIXER DESIGN IS GENERIC AND CAN BE USED IN MANY MISSILE SEEKERS + COMMUNICATIONS SET.	575.9	495.0	77.4	JUL 83	JAN 84
H 83 5107	94 GHZ PULSED POWER COMBINER WORK WAS REDIRECTED TO A SOLID STATE AMPLIFIER FOR MILSTAR. A \$500 MILLION PROGRAM. THIS LOW NOISE AMPLIFIER FOR SATELLITE COMMUNICATIONS WILL BE MADE USING STD LITHO TECHNIQUES RATHER THAN ELECTRON BEAM WRITING. WILL AUTOMATE IMPATT AMP PRODUCTION.	1,179.0			SEP 85	SEP 85
H 82 5109	PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES-UHF APPL TRW IS FABRICATING 403 MHZ AND 506 MHZ SAW DELAY LINES. PHASE I ENG SAMPLES WERE SUBMITTED TO MECHANICAL, ENVIRONMENTAL, + ELECTRICAL TESTS. DEFICIENCIES WILL BE CORRECTED PRIOR TO SUBMISSION OF 2ND ENG SAMPLE LOT. MAJOR END ITEM IS AN/TMO-31.	596.0	500.0	10.0	MAY 85	JUN 85
H 83 5109	PRECISION LOW-COST SAW DELAY LINES FOR UHF APPLICATIONS PHASE II FOLLOW-ON TO ABOVE. TRW IS ESTABLISHING A PILOT LINE TO VERIFY PRODUCTION TECHNIQUES FOR SAW DEVICES. NEW GO NO/GO ROUTINES POINT OUT DEFICIENCIES DURING + AT END OF FABRICATION PROCESS. PER UNIT COST WILL BE REDUCED BY A FACTOR OF TEN.	408.0	382.5		JUN 85	JUN 85
H 83 5111	VAPOR GROWTH FOR 3RD GENERATION PHOTOCATHODE ***** DELINQUENT STATUS REPORT *****					
H 80 5147	HI RESISTIVITY POLYCRYSTALLINE SILICON HEMLOCK IS SUPPLYING T.I. WITH 40MM, VIRGINIA SEMICONDUCTOR WITH 25MM, AND HUGHES WITH 25, 50 AND 65MM DIAMETER DETECTOR GRADE POLYSILICON. THE VAPOR PHASE PURIFICATION PROCESS INVESTIGATION IS INCONCLUSIVE. HEMLOCK HAS A NO-COST EXTENSION TILL SEPT.	430.0	382.0	38.0	SEP 82	NOV 83

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H 83 5151	LIQUID PHASE EPITAXY OF MGCODE F/COMMON MODULE DET ARRAYS A CONTRACTOR WILL ADAPT LIQUID PHASE EPITAXY (LPE) PROCESS FOR GROWING MERCURY-CADMIUM-TELLURIDE FILMS ON A PRODUCTION LINE FOR COMMON MODULE DETECTOR ARRAYS. WILL REPLACE BULK-GRONE MCD ARRAYS. FOR 60, 120 AND 180 ELEMENT ARRAYS.	163.5		13.4	DEC 85	DEC 85
H 83 5162	EXJAM BATTERY MANUFACTURING TECHNOLOGY, PHASE 11 ***** DELINQUENT STATUS REPORT *****					
H 83 5168	AUTOMATIC RETICLE INSPECTION SYSTEM, PHASE 1 ***** DELINQUENT STATUS REPORT *****					
H 83 5174	CAN SPUTTERING CONTROL FOR ZNO A SURVEY OF MANUFACTURERS OF COMPUTER CONTROLLED MASS SPECTROMETERS WAS CONDUCTED. PROCUREMENT SPECIFICATIONS WERE SENT TO INDUSTRY. A SEARCH FOR A PROCESS THAT WOULD BENEFIT FROM CAN AND WOULD WELCOME OUR SUPPORT HAS BEGUN.	150.0		37.5	DEC 84	DEC 84
H 81 5178	PROGRAM FOR A GRAPHITE/EPOXY ANTENNA REFLECTOR ***** DELINQUENT STATUS REPORT *****				APR 82	DEC 83
H 83 5180	MNT FOR METAL DEWAR AND UNBOUNDED LEADS CONTRACTS ARE BEING LET TO HONEYWELL AND SANTA BARBARA RESEARCH CENTER FOR EACH TO DEVELOP PRODUCTION PROCESSES FOR THEIR RESPECTIVE METAL DEWAR DESIGNS. THESE DEWARs REPLACE THE FRAGILE GLASS DESIGN CURRENTLY IN USE IN THE COMMON MODULE DEWAR.	1,350.0		22.0	DEC 84	DEC 84
H 82 5183	PRODUCTION OF LARGE DIAMETER SILICON FOR LASER SEEKERS THE WESTECH ZONE AT HUGHES PRODUCED TWO 3 INCH DIAMETER INGOTS. RESISTIVITY TEST BEGAN AT NBS. THERE IS A DELAY IN FABRICATION OF SPLIT COIL. HUGHES IS CURRENTLY SELLING 1 INCH DIAMETER DETECTOR GRADE SILICON TO T.I. AND TEXAS OPTICAL CORP.	491.0	43.0	12.0	JAN 84	JAN 84
H 82 5193	PROCESS ADJUSTMENTS F/ENVIRON STRESS ON ELECT CIRCUIT METALS A CONTRACTOR IS ANALYZING SURFACE KINETICS OF ELECTRONIC MATERIALS AS THEY AGE. THE FIRM IS OBTAINING FIELD DATA AND DEFINING CHEMICAL REACTIONS, CORROSION PRODUCTS, AND FILM CHEMISTRY. AN AGING TEST IS SOUGHT AND WILL BE VALIDATED.	21.0	21.0		JUN 83	JUN 84
H 83 5196	INDUSTRIAL PRODUCTIVITY IMPROVEMENT - ELECTRONICS HARRIS CORP IS ANALYZING THEIR GOVT INFO SYSTEMS DIV FOR AREAS OF IMPROVEMENT IN BOTH MANUFACTURING AND BUSINESS SYSTEMS. WILL SPECIFY AN APPROACH FOR AN EFFICIENT MFG. CAPABILITY. PM MICNS ASKED DARCOM FOR A WAIVER TO THE DEC 31 R+D SPENDING RMT.	893.0	893.0		JUN 84	JUN 84

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M 81 9508	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES LITTON SHIPPED 5 TUBES AGAINST THE 20 TUBE CONFIRMATORY SAMPLE REQUIREMENT. TUBE YIELDS ARE LOW DUE TO PHOTOCATHODE COSMETIC DEFECTS, EMISSION POINTS, MCP FILM DAMAGE, + VACUUM TUBE LEAKS. MT FUNDS ARE NEAR EXHAUSTION. GOVT AWAITING NEW CO. PROPOSAL.	1,386.0	1,280.0	106.0	JUN 84	JUN 84
2 76 9738	EPITAXIAL + METALLIZATION PROCESSES FOR GAA5 IMPATT DIODES MACON GA-AS PRODUCTS CO WORKED OUT AUTOMATIC GROWTH OF EPI LAYERS, DOPANT PROFILE, GAS FLOW AND DEPOSITION RATE. DRAFT FINAL REPORT WAS CONDITIONALLY APPROVED.	248.8	247.0		JUN 77	APR 83
M 78 9738	PULSED GALLIUM ARSENIDE IMPATT DIODES MACON GA-AS PRODUCTS CO IS ESTABLISHING AUTO COMPUTER CONTROLLER MULTI-LAYER GA-AS EPITAXIAL GROWTH, SUBSTRATE PREPARATION, EPITAXIAL LAYER EVALUATION + METALLIZATION TECHNIQUES FOR PT GA-AS DEVICE PROCESSING AND EVALUATION FOR PULSED IMPATTS.	500.0	441.2	58.8	JUN 80	MAY 84
2 77 9754	CONTIN CYCLE PROC OF SHOCK RESISTANT QUARTZ CRYSTAL UNITS GEND COMPLETED QUARTZ CRYSTAL PILOT RUN. DEFICIENCIES FOUND DURING TESTING WERE TRACED TO POLYIMIDE BOND + TEST EQUIPMENT. CORRECTIVE ACTIONS INCLUDE NEW PILOT RUN MODELS NOW UNDER CONSTRUCTION FROM REMAINING FUNDS. FINAL REPORT REVISION DUE SEP 83.	2,156.8	2,093.8	63.0	DEC 79	SEP 83
2 77 9805	AUTO MICROCIRCUIT BRIDGE PDN MEASURE OF QUARTZ CRYSTALS HUGHES DEVELOPED AN AUTOMATIC MICROCIRCUIT BRIDGE FOR MEASURING QUARTZ CRYSTAL PARAMETERS. SYSTEM WILL MEASURE 25 CRYSTALS PER DAY. RESULTANT TECHNIQUES WILL BE INCORPORATED IN MIL-C-3098. PRINCIPLE INVESTIGATOR WAS REASSIGNED AND RPT IS DELINQUENT.	875.0	775.0	100.0	JAN 79	AUG 83
M 79 9805	QUARTZ CRYSTAL PARAMETER TESTING THIS WAS A FOLLOW-ON TO FY77 EFFORT WITH OBJECTIVE TO INCREASE CAPACITY TO 200 CRYSTALS PER DAY. REPORT IS TARGETED FOR AUGUST.	725.0	685.0	40.0	JUN 80	AUG 83
M 79 9807	PROCESSING HIGH STABILITY QUARTZ CRYSTAL UNIT PHASE III EFFORT AT GEND TO EXPAND CAPABILITY OF PILOT LINE TO 5 + 10 MHZ SC CUT CRYSTALS. NEW QUARTZ BLANKS ARE UNDER EVALUATION. CONFIRMATORY RUN RESTART SCHEDULED FOR AUG 83. \$200K MORE NEEDED IS UNAVAILABLE SO PILOT RUN WORK SCOPE IS NOW REDUCED.	1,272.1	1,214.1	58.0	MAR 81	MAR 85
M 79 9838	MINIATURE CATHODE RAY TUBES FABRICATION OF TEST CONSOLES FOR THE CONFIRMATORY AND PILOT RUN PHASES HAVE BEEN COMPLETED. DRAFTS OF THE ACCEPTANCE AND QUALIFICATION TEST PLANS WERE SUBMITTED. PROCESS SPECIFICATIONS ARE BEING PREPARED AND SOME HAVE BEEN SUBMITTED FOR REVIEW.	369.3	278.7	90.5	AUG 81	JUL 84

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H 78 9060	PDM TECHOE-GALLIUM ARSENIDE MIMAV FIELD EFFECT TRANSISTORS THIS PROJECT IS COMPLETE. GAAS FETS PERFORMED IN SPEC THROUGH 16 GMZ. ION IMPLANTATION AND E-BEAM LITHOGRAPHY WERE USED TO ACHIEVE THE 0.5 MICRON GATE LENGTH. EXTENSION OF THIS TECHNOLOGY TO 0.25 MICRON GATE LENGTHS IS POSSIBLE.	464.3	399.3	65.0	NOV 80	MAR 83
2 77 9073	ANTENNA PATTERN MEASUREMENTS USING NEARFIELD TECHNIQUES ***** DELINQUENT STATUS REPORT *****				OCT 79	DEC 83
H 79 9077	LIGHT EMITTING DIODE ARRAY COMMON MODULE ***** DELINQUENT STATUS REPORT *****				APR 81	DEC 83
H 78 9089	THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE SEE TASKS A AND B BELOW.	1,996.5	1,863.5	160.0	JUN 81	DEC 83
H 78 9089 A	THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE (ITT) ITT HAD ITS WORK SCOPE REDUCED TO 8 CONFIRMATORY TUBE SAMPLES. FOUR TUBES SUCCESSFULLY COMPLETED 400 HR ACCELERATED RELIABILITY TEST. REMAINING 4 TUBES PASSED STANDARD 2000 HR MINIMUM RELIABILITY TEST. FINAL REPORT APPROVED + ALL WORK NOW COMPLETED.	837.0	757.0	80.0	JUN 81	JUN 83
H 78 9089 B	THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE (VARIAN) DELINQUENT TECH REPORT. STATUS OF VARIAN ASSC INC. WORK NOT REPORTED.	1,159.5	1,079.5	80.0	JUN 81	DEC 83
H 81 9089	10MM THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE SEE TASKS A AND B BELOW.	461.0	443.0	17.5	JUN 83	JUN 83
H 81 9089 B	IMP 10MM 3RD GEN 0.9 MICRON WAFER INTENSIFIER TUBE (VARIAN) FOLLOW-ON TO H 78 9089B. VARIAN ESTABLISHED PRODUCTION PROCESS FOR 10 MM INTENSIFIER TUBES WITH IMPROVED GLARE PERFORMANCE AND HIGHER GAIN. TUBE RELIABILITY TESTING + ALL TASKS ARE COMPLETED. MAJOR END ITEM IS ANVIS NIGHT VISION AID.	259.0	250.0	9.0	JUN 83	JUN 83
H 80 9097	SURFACE ACOUSTIC WAVE RESONATOR + REFLECTIVE ARRAY DEVICES ALL 18 REFLECTIVE ARRAY COMPRESSOR CONFIRMATORY SAMPLES WERE RECEIVED AFTER COMPLETING ENVIRONMENTAL TESTS. THE 40 DELIVERABLE RACS ARE READY FOR FINAL SEALING AND ELECTRICAL TESTING. AN INDUSTRY DEMONSTRATION IS SCHEDULED IN SEPTEMBER 1983.	626.3	599.3	27.0	AUG 82	JAN 84
H 82 9905	LO-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS THE MMIC AMPLIFIER DESIGN IS BEING REFINED BEFORE THE FIRST ENG. SAMPLES. DEEP UV EXPOSURE USING RD2000 HITACHI NEGATIVE RESIST RESULTED IN 0.5 MICRON LINES. A PERKIN-ELMER/CENSOR SIRA 100 WAFER-STEPPER WILL BE USED WITH AZ1470 RESIST ON 3IN GAAS WAF	986.7	895.0	15.6	SEP 84	DEC 82

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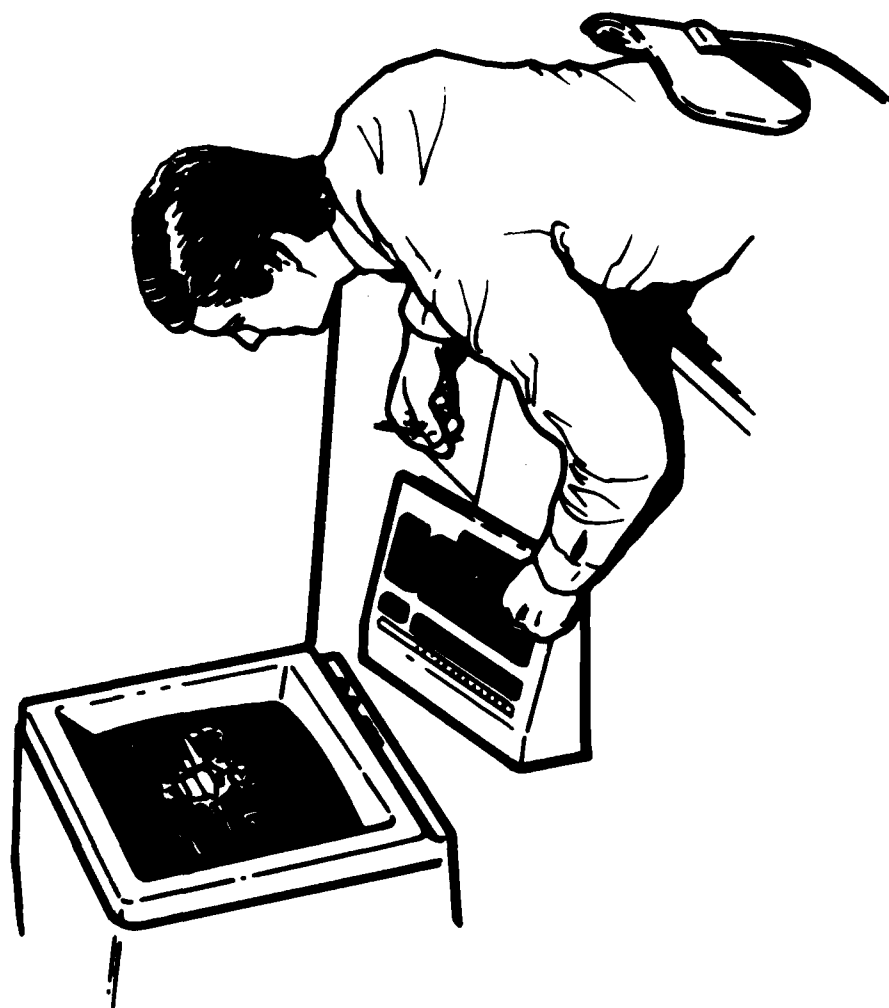
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H 81 9909

PRODUCTION TECHNIQUES FOR SILICON MM POWER TRANSISTORS  
THE ENGINEERING SAMPLES HAVE PASSED ALL TESTS INCLUDING 1000 HR  
LIFE TEST. MSC HAS ATTAINED A HIGH DEGREE OF REPRODUCIBILITY.  
WITH THE PRESENT YIELD OF THE CONFIRMATORY SAMPLES(75PCT), OVER  
700 S-8 AND 30 WATT TRANSISTORS CAN BE MADE FROM ONE WAFER.

803.2	713.2	46.0	SEP 83	JAN 84
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**ARMY MATERIALS AND MECHANICS RESEARCH CENTER  
(AMMRC)**



# ARMY MATERIALS AND MECHANICS RESEARCH CENTER

## CURRENT FUNDING STATUS, 1ST CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	* * C O N T R A C T A L L O C A T E D ( \$ )	* * F U N D I N G E X P E N D E D ( \$ )	* * I N H O U S E R E M A I N I N G ( \$ )	* * F U N D I N G E X P E N D E D ( \$ )
80	1	4,323,300	1,633,700	0 ( 0%)	2,689,600	0 ( 0%)
81	2	4,289,000	1,509,000	0 ( 0%)	2,780,000	0 ( 0%)
82	1	4,507,000	2,112,800	0 ( 0%)	2,394,200	0 ( 0%)
83	1	1,594,400	615,000	0 ( 0%)	979,400	0 ( 0%)
TOTAL	5	14,713,700	5,870,500	0 ( 0%)	8,843,200	0 ( 0%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 40% INHOUSE REMAINING 60%

\*\* AMMRC MIT REPORTING SYSTEM DID NOT INDIVIDUALLY IDENTIFY  
EITHER IN-HOUSE EXPENDITURE OR CONTRACT EXPENDITURE.

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M 80 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	4,323.3	1,633.7		APR 83	OCT 83
M 80 6350 2200	AUTO IDENT SIZING + COUNTING OF PARTICULATE CONTAMINATION THE TECHNICAL WORK FOR THIS PROJECT HAS BEEN COMPLETED. THE TECHNICAL REPORT WILL BE SUBMITTED TO AMHRC BY 31 AUG 1983.	113.5		113.5	SEP 82	MAY 83
M 80 6350 2205	HOLOGRAPHIC INSPECTION OF ROTARY FORGED PREFORMS THE DESIGN EFFORT FOR HIGH RESOLUTION FLOW INSPECTION SYSTEM IS 75 PERCENT COMPLETE. PROTOTYPE ELECTRONIC CARDS HAVE BEEN WIREWAPPED, TESTED AND DEBUGGED. THE CVI 200X WAS RECENTLY DELIVERED TO RPI. IT WAS EXPECTED IN NOV.	105.0	80.0	24.0		AUG 83
M 80 6350 2225	3D SHOCK/VIB TEST 6/MISSILE + ART FUZE HTLS THE PROJECT HAS BEEN SUCCESSFULLY COMPLETED AND A FINAL REPORT IS BEING PREPARED.	69.5	50.0	19.5	DEC 82	DEC 83
M 80 6350 2227	SETBACK DRAG TESTER F/S+A DEVICES ***** DELINQUENT STATUS REPORT *****				JUN 82	DEC 83
M 80 6350 2235	ACUSTIC EMISSION WELD MONITOR SEE PROJECT M 82 6350-2235 FOR STATUS.					
M 80 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION SEE PROJECT M 81 6350-2401 FOR STATUS.					
M 80 6350 2402	INSP PROC-TEST INSIR F/MASS PROD SCATTERABLE MINES COMPUTER ***** DELINQUENT STATUS REPORT *****					
M 80 6350 2405	BURN TIME TEST FOR ZIRCONIUM POWDER IN THERMAL BATTERY ***** DELINQUENT STATUS REPORT *****					DEC 83
M 80 6350 2409	EMISSION SPECTROGRAPH ANAL HARAGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****					DEC 83
M 80 6350 2418	HALF LIFE OF TRITIUM LAMPS SEE PROJECT M 80 6350-2418 FOR STATUS.					
M 80 6350 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM SEE SUBTASK M 81 6350-2420 FOR STATUS.					OCT 83
M 80 6350 2422	INSPECT/MEAS METHOD FOR SPHERICAL SURFACED COMPONENTS THE TECHNICAL WORK HAS BEEN COMPLETED. A TECHNICAL REPORT WILL BE PUBLISHED IN JULY 1983.	50.0	8.8	41.2		JUN 83

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M 80 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM ***** DELINQUENT STATUS REPORT *****				JUL 82	AUG 83
M 80 6350 2425	OPTICAL TESTING OF FAR INFRARED MATERIALS INTERFEROGRAMS WERE MADE ON 45 GERMANIUM OPTICAL BLANKS. THE SAMPLES WERE NORMALLY THREE INCHES IN DIAMETER AND ONE-HALF INCH THICK. THE SAMPLES SHOWED A MEAN VARIATION IN INDEX VARIATION.	85.0		77.0	SEP 82	JUN 83
M 80 6350 2433	AUTO UNIVERSAL HI VOLTAGE POWER SUPPLY TEST CONSOLE THE ELECTRONIC CONSOLE HAS BEEN COMPLETED AND IS BEING USED IN THE MANUAL MODE TO TEST ANVIS, AN/AVS-6 POWER SUPPLIES. THE SYSTEM OPERATING PROGRAM HAS BEEN COMPLETED AND AT LEAST 12 OF 70 INDIVIDUAL TEST SEQUENCES HAVE BEEN COMPLETED.	198.0		14.5	MAY 83	SEP 83
M 80 6350 2444	ULTRASONIC TESTING OF ROADWHEELS THIS PROJECT HAS BEEN COMPLETED. THE DUPLICATION AND DISTRIBUTION OF THE TECHNICAL REPORT REMAINS TO BE COMPLETED.	55.0	41.5	9.5		MAR 83
M 80 6350 2445	ULTRASONIC TIRE INSPECTION ***** DELINQUENT STATUS REPORT *****					DEC 83
M 80 6350 2446	BLACKLIGHT VIDEO INSPECTION SYSTEM ADDITIONAL FUNDS TO CONTINUE THE WORK WERE MADE AVAILABLE IN APRIL 1983. A PURCHASE REQUEST FOR AN OFF-THE-SHELF VIDEO SYSTEM HAS BEEN SENT TO PROCUREMENT DIRECTORATE.	35.0		7.6	JUN 83	APR 84
M 80 6350 2450	GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT SEE PROJECT M 79 6350-2450 FOR STATUS.	60.0	20.0	20.0		APR 84
M 80 6350 2453	THICKNESS MEASUREMENT OF NON-MAGNETIC COATINGS ***** DELINQUENT STATUS REPORT *****					DEC 83
M 80 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES SEE PROJECT M 81 6350-2603 FOR STATUS.				APR 82	
M 80 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS ***** DELINQUENT STATUS REPORT *****				SEP 81	DEC 83
M 80 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE SEE PROJECT M 82 6350-2611 FOR STATUS.					
M 80 6350 2613	INFLOW AIR BLEED TEST, LTC-712 ENGINE ***** DELINQUENT STATUS REPORT *****					DEC 83
M 80 6350 2614	TEMP. COMPENSATED VOLTAGE CONT CRYSTAL OSCILLATOR TEST METH. TESTING FOR EVALUATING FREQUENCY STABILITY OF TEMPERATURE-COMPENSATED VOLTAGE CONTROLLED CRYSTAL OSCILLATORS (TCVCO) AS CRYSTAL CONTROLLED CRYSTAL CLOCKS IN THE DGM EQUIP WAS COMPLETED 29 DEC 82. A DRAFT TR REPORT HAS BEEN SUBMITTED AND EVALUATED.	75.0	73.0			JUL 83

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M 80 6350 2624	AUTO ANALYSIS OF PCB PLATING SOLUTION STRENGTH ***** DELINQUENT STATUS REPORT *****					DEC 83
M 80 6350 2627	INFRARED SPECTROSCOPY ANALYSIS OF NON-VOLATILE VEHICLES ***** DELINQUENT STATUS REPORT *****				APR 81	DEC 83
M 80 6350 2628	STANDARD CONTAMINANT FOR TEST FUELS THIS EFFORT HAS BEEN COMPLETED AND THE FINAL TECHNICAL REPORT, APG-MT-5759, HAS BEEN PUBLISHED. THIS REPORT CONTAINS THE INSTRUCTIONS IN THE USE OF POLYPROPYLENE POWDERS TO CHECK THE EFFICIENCY OF FUEL FILTERS.	30.0		27.4	AUG 81	JAN 83
M 80 6350 2630	CRITICAL ULTRASONIC INSPECTION PROBLEMS WITHIN THE ARMY ***** DELINQUENT STATUS REPORT *****				JAN 81	DEC 83
M 80 6350 2631	CRITICAL ELECTROMAGNETIC INSP PROBLEMS WITHIN THE ARMY SEE PROJECT M 81 6350-2631 FOR STATUS.					
M 80 6350 2632	DEVELOPMENT OF INFRARED AND OPTICAL TESTS ***** DELINQUENT STATUS REPORT *****				DEC 81	DEC 83
M 80 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****				FEB 81	DEC 83
M 80 6350 2639	ROADWHEEL SEAL TEST MACHINE PROCUREMENT OF REQUIRED PURCHASE ITEM IS IN PROGRESS. IN-HOUSE FABRICATION OF THE MACHINE IS IN PROGRESS.	135.0	1.8	54.3	JUN 82	DEC 83
M 80 6350 2640	TRACK TEST MACHINE SEE PROJECT M 81 6350-2640 FOR STATUS.				SEP 82	
M 80 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION ***** DELINQUENT STATUS REPORT *****				SEP 80	DEC 83
M 80 6350 2646	PISTON ACTUATOR TEST ASSEMBLY OF THE SYSTEM IS COMPLETE. THE DESIGN HAS BEEN FROZEN. THE SYSTEM IS BEING CALIBRATED AT THE PRESENT TIME. AFTER CALIBRATION, 100 PISTON ACTUATORS WILL BE TESTED AND THE FINAL REPORT WRITTEN.	85.0				AUG 83
M 80 6350 3006	ACOUSTIC EMISSION MONITORING/CONTROL STRAIGHTENING THE SCOPE OF THIS PROJECT HAS BEEN EXPANDED. ADDITIONAL FUNDS, 36K FOR ENGINEERING LABOR AND SMALL PARTS MANUFACTURE AND ACQUISITION HAVE BEEN REQUESTED FROM AMHRC.	59.0	48.0	5.7	SEP 83	SEP 83

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M 81 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	4,289.0	1,509.0		OCT 83	UCT 83
M 81 6350 1802	M732 FIELD ARTILLERY FUZE/S+A TRANSPORTATION VIBRATION TEST THE 18K SHORTFALL TO COMPLETE THE PROJECT WAS OBTAINED FROM AMRC. TESTING IS CONTINUING ON FOUR NEW GROUPS OF S+A DEVICES. THE MEASUREMENTS AND DATA ANALYSIS WILL BE COMPLETED AND THE REPORT WRITTEN BY JULY 1983.	103.2				JUL 83
M 81 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT THE FAB AND TESTING OF COMPUTER INTERFACES AND THEIR INTEGRATION INTO THE MEASUREMENT SYSTEM IS NEAR COMPLETION. ALL MAJOR COMPONENTS OF THIS SYSTEM HAVE BEEN RECEIVED AND MEET SYSTEM REQUIREMENTS.	65.0		65.0		DEC 83
M 81 6350 2245	CERAMIC MATL NDT EVALUATION TECHNIQUES ***** DELINQUENT STATUS REPORT *****					DEC 83
M 81 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION THE REDESIGN OF THE SCANNING PROBE HAS BEEN SENT TO THE CONTRACTOR FOR FABRICATION. ALSO, A NUMBER OF SYSTEM ELECTRICAL PROBLEMS WERE DIAGNOSED AND REPAIRED.	362.0	289.0	35.0		SEP 84
M 81 6350 2407	LIQUID CHROMATOGRAPHY FOR EPOXY RESIN FORMULATION ***** DELINQUENT STATUS REPORT *****					DEC 83
M 81 6350 2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****					DEC 83
M 81 6350 2418	HALF LIFE OF TRITIUM LAMPS THE TECHNICAL WORK HAS BEEN COMPLETED. THE TECHNICAL REPORT IS SCHEDULED FOR PUBLICATION SEPTEMBER 1983.	85.0	5.3			SEP 83
M 81 6350 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM THE SCRATCH SCATTERING PHENOMENON STUDY HAS BEEN COMPLETED. THE STUDY RECOMMENDED A SCRATCH PROFILE FOR THE STANDARDS. THE SCRATCH STANDARDS ARE BEING MANUFACTURED IN ACCORDANCE WITH MBS PROPOSED SCRATCH PROFILE.	252.0	200.0	51.0		OCT 83
M 81 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM ***** DELINQUENT STATUS REPORT *****					AUG 83
M 81 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES THE TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL REPORT IS SCHEDULED FOR PUBLICATION IN SEPTEMBER 1983.	110.0	37.7	18.6		SEP 83

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M 81 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2631	CRITICAL ELECTROMAGNETIC INSP PROBLEMS WITHIN THE ARMY THE EVALUATION OF THE EDDY CURRENT INSTRUMENTATION WAS STARTED. THE DESIGN OF THE PROBE COIL IS NOT CONSIDERED OPTIMUM. ALSO, HIGHER PRIORITY COMMITMENTS DEFERRED WORK ON THE EDDY CURRENT TEST PROCEDURES.	67.0		50.0		SEP 83
M 81 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2639	ROADWHEEL SEAL TEST MACHINE SEE PROJECT M 80 6350-2639 FOR STATUS.					
M 81 6350 2640	TRACK TEST MACHINE ALL COMPONENT PARTS HAVE BEEN COMPLETED. ALL DRAWINGS ARE APPROXIMATELY 95 PERCENT COMPLETE.	275.0		240.0		SEP 83
M 81 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2800	THERMAL + DYNAMIC MECH CHAR-PREPREG AGING AND CURE BEHAVIOR ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TESTING SEE PROJECT M 82 6350-2802 FOR STATUS.	75.0			JUN 83	JUN 83
M 81 6350 2803	AUTO MEAS OF STRENGTH + OXIDE LIMITING FLAWS IN CERAMIC TURB ALL THE FUNDS HAVE BEEN EXPENDED. THE OBJECTIVE OF THIS EFFORT IS TO DEVELOP THE CAPABILITY TO CORRELATE PORE STRUCTURE TO STRENGTH LIMITING FLAWS. THE CORRELATION STUDIES CANNOT BE PERFORMED UNTIL ADDITIONAL FUNDS 30.7K ARE MADE AVAILABLE.	75.0	35.0		AUG 83	AUG 83
M 81 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST PROTOTYPE APPARATUS HAS BEEN COMPLETED. THE SHUTTLE VALVE SPUD HAS BEEN REDESIGNED PROVIDING SUPERIOR FORCE BALANCING CHARACTERISTICS AND EASING MANUF. FINAL DRAWINGS AND INSTRUMENTATION MANUAL ARE IN-PROCESS.	249.0	224.0	25.0		JUL 83
M 81 6350 2808	ADVANCED NDT OF REINFORCED PLASTIC COMPOSITES-SPAR + BEAM ***** DELINQUENT STATUS REPORT *****					DEC 83
M 81 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION THE MFL INSPECTION SYSTEM DESIGN AND STANDARDS HAVE BEEN REVIEWED. THE FABRICATION OF SYSTEM IS IN-PROCESS.	230.0	197.0	33.0		SEP 83

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M 81 6350 2813	ADAPTION KIT FUNCTION EMBEDDED MICROPROCESSOR TESTING SEE SUBTASK M 82 6350-2813 FOR STATUS.	283.8		283.8		JUL 83
M 81 6350 2815	CANNON TUBE AUTOMATED CHROME PLATE THICKNESS MEASUREMENT THE SPECIFICATION FOR THE DEVELOPMENT AND FABRICATION OF THE CUSTOM INTERFACE HAD BEEN PREPARED AND SENT TO PROCUREMENT FOR REVIEW. CHANGES WERE PROPOSED AND THE SPEC WAS REVISED. IT IS READY FOR SOLICITATION. THE FIXTURE DESIGN IS COMPLETE.	69.6		31.0	OCT 82	SEP 83
M 81 6350 2817	FIBER OPTIC CABLE ASSEMBLIES TEST CRITERIA DEVELOPMENT AFTER EVALUATING THE PROPOSAL, IT WAS CONCLUDED THAT THE FUNDS THAT WERE AVAILABLE WERE INSUFFICIENT. AMMRC WAS ADVISED OF THIS SITUATION. ADDITIONAL FUNDS WERE MADE AVAILABLE BY AMMRC.	160.0	141.0			JAN 84
M 81 6350 2820	INTEGRATED FUCAL PLANE MODULE TEST STATION SEE PROJECT M 82 6350-2820 FOR STATUS.					
M 81 6350 2826	LIO CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS SEE PROJECT M 82 6350-2826 FOR STATUS.					
M 81 6350 2827	M-HEXYLCARBORANE CAPILLARY GAS CHROMATOGRAPHIC ANALYSIS **** DELINQUENT STATUS REPORT ****				AUG 82	DEC 83
M 81 6350 2828	COMP MOTOR CASES ACOUSTIC EMISSION PROOF TEST DAMAGE EVAL THIS PROJECT HAS BEEN COMPLETED. THE TECHNICAL REPORT HAS BEEN SUBMITTED TO AMMRC.	94.2		94.2		DEC 82
M 81 6350 2829	DETECTOR DEWAR MICROPHICS PROD TEST SET + PROCEDURES THE FINAL DESIGN OF THIS TEST STATION IS APPROX 95 PERCENT COMPLETE. ORDERS HAVE BEEN PLACED FOR MUCH OF THE HARDWARE (VIBRATIONAL AND ELECTRONICS) UNDER THE IPE EXPANSION CONTRACT. TEST FIXTURE DESIGN IS STILL IN PROCESS.	210.0	165.0	37.0		AUG 83
M 81 6350 2834	IMPROVED TRACK PIN SHUT PEENING INSPECTION SEE PROJECT M 83 6350-2834 FOR STATUS.					
M 81 6350 2858	STRESS READING TRANSDUCER FOR LARGE COMPOSITE COMPONENTS THE TEST FIXTURE HAS BEEN COMPLETED. A LUNA-PRO PHOTOMETER HAS BEEN ACQUIRED.	75.0		75.0	DEC 82	JCT 83
M 81 6350 2943	DEPLETED URANIUM KE PENETRATORS ULTRASONIC INSP PROCEDURES THE SONIC UNIT AND THE W774 S/N 735 HEAT TREATED STANDARDS WERE RETURNED TO BATTELLE PACIFIC NORTHWEST LABORATORIES. IN REVIEW THE PROGRESS OF THE PROJECT, IT WAS DETERMINED THAT THE MEASUREMENT OF OFFSET TRANSDUCER DISTANCE NEED TO BE RECORDED.	75.0			DEC 82	SEP 83

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M 81 6350 2944	PROTECTIVE MASK CANISTER ELECTROMAGNETIC INSP PROCEDURES THE TESTER HAS BEEN ASSEMBLED AND TESTED AT THE CONTRACTORS FACILITY. IT PERFORMED IN AN ACCEPTABLE MANNER IN DETECTING FISSURING AND WALL THINNING TYPE DEFECTS. FINAL DEBUGGING AND REPRODUCIBILITY RUNS ARE BEING CONDUCTED.	30.0		29.0	DEC 82	JUL 83
M 81 6350 2945	CA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE MIL-STD-1679 AND ASSOCIATED DIDS WERE ANALYZED AND FOUND TO BE USEABLE FOR AIE SOFTWARE IN PROCUREMENTS. LIBRARY APPROACHES WERE VALIDATED AND ANOTHER PAD DIVISION HAS ALREADY PROCURED PARALLEL EQUIPMENT FOR WIDER MTT IMPLEMENTATION.	125.0			NOV 82	NOV 83
M 81 6350 2947	MOBILITY MONITORING SYSTEM (MMS) SEE PROJECT M 83 6350-2947 FOR STATUS.	80.0	80.0		DEC 84	DEC 85
M 81 6350 2977	IMAGE INTENSIFIER SYSTEM VEILING GLARE TESTER SOLICITATION WAS SENT TO PROSPECTIVE CONTRACTORS 26 APR 83. THE CONTRACT AWARD IS SCHEDULED FOR JULY 1983.	100.0		23.2	SEP 84	OCT 84
M 82 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	4,507.0	2,112.8		OCT 84	OCT 84
M 82 6350 2235	ACOUSTIC EMISSION WELD MONITOR A MEETING WAS HELD WITH GENERAL DYNAMICS AND TACOM PERSONNEL TO FINALIZE PROCEDURES FOR THE SIX MONTH PRODUCTION TEST SCHEDULE TO START IN 2ND QTR FY83.	185.0	185.0			FEB 84
M 82 6350 2245	CERAMIC MATL NDT EVALUATION TECHNIQUES ***** DELINQUENT STATUS REPORT *****				APR 83	DEC 83
M 82 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM ***** DELINQUENT STATUS REPORT *****					AUG 83
M 82 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCUAL FILTERS PHASE II CANISTER TEST HAS BEEN DELAYED UNTIL 26 MAY 83. THE LATE DELIVERY OF A VACUUM REGENERATION SYSTEM IS RESPONSIBLE FOR THIS DELAY. THIS DELAY WILL NOT IMPACT THE COMPLETION OR COST OF THE CONTRACT.	48.0			JUN 83	OCT 83
M 82 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE SEE PROJECT M 83 6350-2611 FOR STATUS.	100.0		34.0	SEP 83	DEC 83
M 82 6350 263C	CRITICAL ULTRASOUND INSPECTION PROBLEMS WITHIN THE ARMY ***** DELINQUENT STATUS REPORT *****					DEC 83



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M 82 6350 2640	TRACK TEST MACHINE SEE PROJECT M 81 6350-2640 FOR STATUS.					
M 82 6350 2695	ACCEPTANCE TEST FOR 20MM DECLUTCHING FEEDERS ON PROD CONTR THIS PROJECT IS BEING CANCELLED DUE TO THE SEVERE FUNDING REDUCTION BY DARCOM. 4000 DOLLARS IS BEING RETAINED FOR THE PREPARATION OF THE FINAL SUMMARY REPORT.	92.3			JUN 83	JUN 83
M 82 6350 2801	NEW PROPELLANT SURVEILLANCE TEST ***** DELINQUENT STATUS REPORT *****				JUL 83	DEC 83
M 82 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TEST INVESTIGATED MEANS OF DETERMINING THE REACTIVITIES OF METALS BY THERMAL ANALYSIS. FOUND THAT PROPOSED TEST WAS NOT REPRODUCIBLE DUE TO INABILITY TO OBTAIN UNIFORM OXIDATION OF METALS IN THERMOBALANCE CRUCIBLE.	75.0			JUN 83	JUN 83
M 82 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST PRELIMINARY ENGINEERING DRAWINGS AND THE EQUIPMENT TEST PLAN HAVE BEEN APPROVED. CONTRACTORS SAFETY ANALYSIS WAS ALSO APPROVED RESULTING IN DESIGN CHANGES TO PROTECT THE OPERATOR.	40.0		16.0	JUL 83	OCT 83
M 82 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION SCOPE OF WORK WAS COMPLETED AND FORWARDED TO PROCUREMENT.	90.0	55.0	9.0	FEB 84	JUL 84
M 82 6350 2813	ADAPTION KIT FUNCTION EMBEDDED MICROPROCESSOR TESTING THE TECHNICAL DATA PACKAGE IS NEARLY COMPLETE. THE OPERATING INSTRUCTIONS ARE FINISHED, ONLY REQUIRING RETYPING IN FINAL FORM. MOST OF THE DRAWINGS ARE FINISHED, SOME IN PRELIMINARY FORM. SOFTWARE PROGRAMS ARE COMPLETED.	615.5		491.0	APR 84	JUL 83
M 82 6350 2820	INTEGRATED FOCAL PLANE MODULE TEST STATION THE DEMAR WAS RECEIVED AND CHECKED FOR LEAKS, CONTINUITY AND TEMPERATURE CONTRUL. THE ORIGINAL CONTRULLER WAS FOUND TO BE FAULTY AND REPLACED. PROBLEMS REMAIN WITH CABLING, THE DEMAR CONFIGURATION AND THE COLD SHIELD.	200.0	111.8	7.2		OCT 83
M 82 6350 2826	LIQ CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS THE PROGRESS OF THIS PROJECT WAS PRESENTED TO THE JANNAF PROPELLANT CHARACTERIZATION SUBCOMMITTEE IN APRIL. THE WORK WAS WELL RECEIVED AND OVER 15 REQUESTS FOR REPRINTS OF THE PAPER AND PREVIOUS REPORTS WERE RECEIVED.	80.0		52.9		AUG 83
M 82 6350 2834	IMPROVED TRACK PIN SHUT PEENING INSPECTION SEE PROJECT M 83 6350-2834 FOR STATUS.				AUG 84	

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M 82 6350 2841	STANDARDIZATION OF FRACTURE TOUGHNESS TESTS ***** DELINQUENT STATUS REPORT *****					SEP 83
M 82 6350 2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT A FILM OF THE DROPIESTER WAS TAKEN BY AMRC TO PRESENT TO TECOM. SUGGESTIONS FOR MODIFICATION TO TESTER DUE TO SAFETY PRECAUTIONS PLUS THE IMPLEMENTATIONS OF A 12FT. SQ. STEEL DROP PAD HAS BEEN DISCUSSED BY AMRC AND TECOM.	75.0			OCT 83	AUG 84
M 82 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING CONTRACTS WERE AWARDED TO PURCHASE AND INSTALL AN UPDATED DIGITAL ARRAY PROCESSOR. THE UPDATING OF THE EXISTING SOFTWARE TO INTERFACE WITH THE PROCESSOR IS ALSO UNDERWAY.	310.0	280.0	30.0		SEP 84
M 82 6350 2878	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EHAT A FEASIBILITY STUDY FOR USE OF THE EHAT SYSTEM ON GUN TUBE MATERIAL WAS PERFORMED BY ROCKWELL INTERNATIONAL, THIS STUDY WAS UNDERTAKEN AT NO COST TO GOVT.	63.0		26.4	JUN 86	JUN 85
M 82 6350 2880	STRAIN TEMP DEPH + SCAT MEAS TECH + EQUIP FOR LASER ROD EVAL ***** DELINQUENT STATUS REPORT *****				MAY 84	MAY 84
M 82 6350 2881	DYNAMIC LASER ROD EVALUATION ***** DELINQUENT STATUS REPORT *****				MAY 84	SEP 84
M 82 6350 2882	NUCLEAR MAG RESONANCE TEST FOR DETM MUJSTURE IN COMPOSITES FABRICATION OF THE NMR SYSTEM IS PROGRESSING. TWO MAGNET DESIGNS HAVE BEEN CONSIDERED, AN ELECTROMAGNET AND A PERMANENT. THE COST IS EXPECTED TO BE COMPARABLE. THE ELECTROMAGNET WILL OFFER FLEXIBILITY OF CHANGING THE OPERATING FREQUENCY.	80.0	60.0		JUN 83	DEC 83
M 82 6350 2883	AUTO REFORMATTING OF ATE LANG FOR TESTING SEMICONDUCTORS EXCELLENT PROGRESS HAS BEEN MADE IN DEVELOPING AN AUTOMATIC ATE LANGUAGE TRANSLATOR GOING FROM TEKTEST TO FACTOR (FAIRCHILD). THE TRANSLATOR HAS BEEN WRITTEN IN STANDARD FORTRAN FOR PORTABILITY AND CODING HAS NEARLY BEEN COMPLETED.	144.0	144.0		OCT 82	AUG 83
M 82 6350 2887	SIMULANT PERMEATION TESTING OF PROTECTIVE CLOTHING THE CONTRACT WAS AWARDED TO RESEARCH TRIANGLE INSTITUTE (RTI). SAMPLE MAIL HAVE BEEN REQUESTED FROM THE ARMY AND FURNISHED BY THE ARMY. THIS PRELIMINARY SCREENING WILL BE NARROWED TO APPROX. 100 REVIEW CANDIDATES.	45.0			JUN 83	MAR 84
M 82 6350 2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS CONSIDERABLE PROGRESS HAS BEEN MADE. PROCEDURES FOR SAMPLING AND PREPARING SOLUTIONS HAVE BEEN DEV. EXTRACTION METHODS FOR ISOLATING ADDITIVES FROM RESINS HAVE BEEN EVALUATED. IMPROVED HPSEC ANALYSIS OF POLYCARBONATES HAVE BEEN DEVELOPED.	80.0	19.4		JUN 85	JUN 85

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M 82 6350 2891	PG CD TE MATERIAL SCREENING TEST THREE PROPOSALS WERE RECEIVED. ALL WERE SUBSTANTIALLY OVER PRICED. THE SCOPE OF WORK HAS BEEN REDUCED. THE RESUBMISSION OF BIDS ARE DUE MAY 9 1983. THE TESTS THAT WERE REMOVED FROM THE SOM WERE THICKNESS AND X VALUE UNIFORMITY.	175.0		2.6	DEC 84	SEP 85
M 82 6350 2892	REMOTE IMAGING OF PREFORM DEFECTS BY COMPUTER CONTROL TECHNICAL SPECIFICATIONS HAVE BEEN COMPLETED AND SUBMITTED TO PROCUREMENT. THE CONTRACT HAS NOT BEEN AWARDED. THE CONTRACT IS SCHEDULED TO BE AWARDED IN JUNE 1983.	85.0	60.0	8.7	DEC 83	FEB 84
M 82 6350 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY SEE PROJECT M 83 6350-2894 FOR STATUS.	75.0		66.0	FEB 83	UCT 83
M 82 6350 2895	NOT OF ADVANCED COMPOSITE STRUCTURES FOR BRIDGING A LABORATORY SYSTEM WAS DESIGNED THAT WILL PROVIDE AN ULTRASONIC C-SCAN RECORDING FROM A HAND SCAN OF LARGE AREA PARTS. THE INFORMATION CAN BE PROVIDED ON A COLOR PRINTER.	86.5	12.0	62.5	MAR 83	MAR 85
M 82 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES SEE PROJECT M 83 6350-2896 FOR STATUS.				AUG 84	
M 82 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY SEE PROJECT M 63 6350-2897 FOR STATUS.	355.0	131.5		DEC 85	SEP 85
M 82 6350 2901	LASER AIMING DEVICE PREVIEWED THE FEASIBILITY OF ADAPTING THE EXISTING GATED TV SYSTEM DEVELOPED AT APG. SOM WAS PROVIDED TO APG FOR POSSIBLE EXECUTION IN LIEU OF CONTRACTUAL EFFORT. APG DECLINED DUE TO EXISTING WORK LOAD. EVALUATED 4 UNSOLICITED PROPOSALS.	170.0			AUG 84	FEB 85
M 82 6350 2913	IMPROVED METHODOLOGY FOR GENERATION OF TOXIC CHEM AGENTS THE CONTRACTOR HAS COMPLETED THE BREADBOARD DESIGNS. THESE TWO TECHNIQUES ARE THE ULTRASONIC SPRAY NOZZLE AND THE PIEZOELECTRIC CRYSTAL. THE CONTRACTOR STILL HAS TO MAKE FINAL MODIFICATIONS TO THE BREADBOARD DESIGNS, AND DEV DRAWING PACKAGES.	19.9			SEP 84	SEP 83
M 82 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION THE CONTRACT WAS AWARDED IN MARCH 1983 AND A START OF WORK MEETING WAS HELD ON MARCH 10, 1983. CONTRACTOR HAS ESTABLISHED PRIORITY VALUES FOR THE 6V53 ENGINE COMPONENTS REBUILD AND IS PROCEEDING ON SCHEDULE.	200.0	161.0	9.1	JUL 85	APR 84
M 82 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP PROCUREMENT SPEC HAVE BEEN COMPLETED TO DEFINE CAPABILITIES OF THE SYSTEM REQUIRED FOR DETECTION OF RESIDUAL STRESS LEVELS AT THE BORE SURFACE OF THE GUN TUBE.	120.0	96.0	12.4	NOV 83	MAR 84

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M 82 6350 2938	EDDY CURRENT CRACK INSPEC PROCEDURE F/BORE EVACUATOR HOLES ***** DELINQUENT STATUS REPORT *****				MAR 83	SEP 83
M 82 6350 2945	CA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE ALL PROCUREMENT WORK HAS BEEN COMPLETED, AWAITING THE MCO APPROVAL. WORK IS ALSO CONTINUING ON THE AIE SOFTWARE LIBRARY PROCEDURES TO AUTOMATE THE TRACKING OF INSPECTION REQUIREMENTS.	120.0	60.0	47.2	JUN 83	NOV 83
M 82 6350 2950	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY Q R B TESTS WERE DEVELOPED FOR SILVER-FILLED POLYIMIDE ADHESIVES FOR THE PURPOSE OF ESTABLISHING AN INCOMING MATL INSP PROGRAM. THESE TESTS ARE DESIGNED TO DIRECTLY MEASURE PROPERTIES OF CURED ADHESIVES, MECH STRENGTH, AND OUTGASSING.	77.0	39.0		JUN 83	DEC 83
M 82 6350 2951	AN/PRS-8 MINE DETECTOR PRODUCTION TEST SET TESTS ARE CURRENTLY BEING CONDUCTED TO COMPARE THE PRUTOTYPE SIMULATOR TO THE OLD AN/PRS-7 SIMULATOR IN THE MEASUREMENT OF ASUM VALUES, AND IN REPEATABILITY OF DATA.	115.0			MAR 83	NOV 83
M 83 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	1,594.4	615.0			OCT 85
M 83 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS SEE PROJECT M 82 6350-2448 FOR STATUS.					
M 83 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE THE MILITARY SPECIFICATION FOR ASC WHETLERITE IS BEING REVISED TO INCORPORATE THE RESULTS OF THIS MNT PROJECT.	37.0		4.0	DEC 83	DEC 83
M 83 6350 2642	ADVAN PENETRATING RADIATION TECH FOR PRODUCT EVALUATION ***** DELINQUENT STATUS REPORT *****					
M 83 6350 2828	ASSESS OF PROOF TEST DAMAGE OF COMPONENT MISSILE MOTOR CASES SEE PROJECT M 81 6350-2828 FOR STATUS.					
M 83 6350 2834	IMPROVED TRACK PIN SHUT PEENING INSPECTION A FIVE MONTH DELAY IN AWARDED THE CONTRACT WAS EXPERIENCED. HOWEVER, THE PROJECT COMPLETION WILL NOT BE DELAYED. THE IMPLEMENTATION PHASE HAS STARTED. THE FATIGUE TESTING OF THE TRACK PIN HAS BEEN RESUMED.	41.0		12.0	APR 84	APR 84
M 83 6350 2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT SEE PROJECT M 82 6350-2844 FOR STATUS.					
M 83 6350 2876	PRUTOTYPE INFRARED SEEKER AND AUTOPILOT TESTING SEE PROJECT M 82 6350-2876 FOR STATUS.					

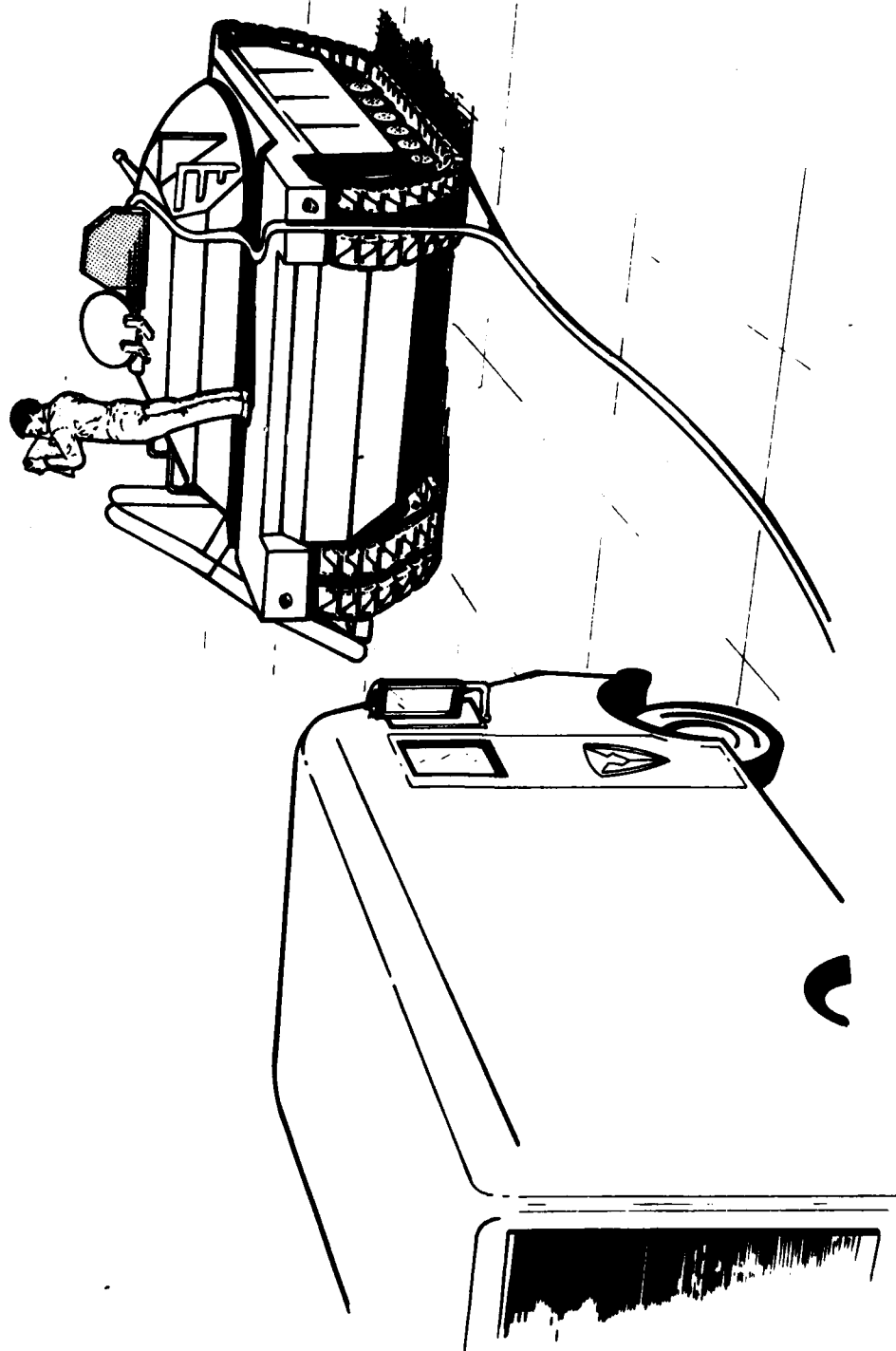
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M 83 6350 2886	IN-PROCESS DETM OF LOWERED DETECTION LIMIT OF PHOTOMETRICS A CONTRACT FOR CONDUCT OF THIS PROGRAM IS CURRENTLY BEING NEGOTIATED.	64.0			MAY 84	MAY 84
M 83 6350 2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS SEE PROJECT M 82 6350-2889 FOR STATUS.					
M 83 6350 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY A LITERATURE SEARCH HAS BEEN COMPLETED TO DETERMINE THE MOST APPROPRIATE TECHNIQUES FOR MAKING ULTRASONIC VELOCITY MEASUREMENTS. AN ULTRASONIC INTERFEROMETER HAS BEEN PURCHASED FOR HIGH RESOLUTION VELOCITY MEAS.	41.5		3.0	OCT 83	OCT 83
M 83 6350 2895	NOT OF ADVANCED COMPOSITE STRUCTURES FOR BRIDGING A LABORATORY MODEL OF A HAND SCAN ULTRASONIC C-SAN SYSTEM HAS BEEN ASSEMBLED. THE KEY ELEMENTS OF THIS SYSTEM ARE A 2X2 IN MICROPHONE ARRAY, MICROCOMPUTER + DIGITAL VIDEO IMAGING HARDWARE. COLOR CODED ULTRASONIC SCANS HAVE BEEN GENERATED + DISPLAYED.	41.5		10.0	MAR 85	MAR 85
M 83 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES IT WAS DETERMINED THAT THE INTERIM TEST ITEM STIMULATOR DEVELOPED BY APG WILL BE USED AT THE BASE LINE SYSTEM. ACTION WAS TAKEN TO PLACE PHASE II OF THIS EFFORT ON CONTRACT IN MAY 1983 WHICH WAS EXERCISED UNDER OPTION 7 OF THIS CONTRACT.	466.0	220.0		SEP 83	SEP 83
M 83 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY SEE PROJECT M 82 6350-2897 FOR STATUS.					
M 83 6350 2914	DEV OF AN AUTO ANAL AND CONTROL SYSTEM FOR GAS LIFE TESTERS FLAME IONIZATION DETECTORS AND DATA ACQUISITION AND CONTROL INSTRUMENTATION FROM SEVERAL SOURCES HAVE BEEN EVALUATED. PURCHASE REQUESTS FOR THE HARDWARE ARE BEING PROCESSED.	44.0			MAY 84	MAY 84
M 83 6350 2926	TESTING OF M55 DETLATOR STAB SENSITIVITY AND OUTPUT ***** DELINQUENT STATUS REPORT *****					
M 83 6350 2932	ASSESSMENT OF GLARE/SCATTER IN FIRE CONTROL OPTICAL SYSTEMS ***** DELINQUENT STATUS REPORT *****					
M 83 6350 2934	APPLIC LF X-RAY TV SYSTEM FOR DIFFRACTION PATTERNS ***** DELINQUENT STATUS REPORT *****					
M 83 6350 2946	IMPROVED PROGRAMMABLE HIGH RESPONSE FUNCTIONAL ACCEL TESTER ***** DELINQUENT STATUS REPORT *****					

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M 83 6350 2947	MOBILITY MONITORING SYSTEM SEVERAL SCHEMATICS AND PARTS LAYOUT DIAGRAMS WERE RECEIVED FROM ABERDEEN PROVING GROUND. ALSO, APC HAS INDICATED THAT THE COMPUTER CIRCUITS WHICH WERE DELAYED IN PROCUREMENT ARE EXPECTED TO ARRIVE BY 30 JUNE 1983.	10.0			DEC 85	DEC 85
M 83 6350 2962	AUTOMATION OF 65 DEGREE-C PROPELLANT SURVEILLANCE TEST ***** DELINQUENT STATUS REPORT *****					
M 83 6350 2968	INVEST OF SCAN PHOTOACOUSTIC MICROSCOPY F/CERAMICS INSPECT PREPARATION OF A STATEMENT OF WORK HAS BEEN INITIATED FOR THE CONTRACT TO DEMONSTRATE THE APPLICATION OF THE SCANNING PHOTOACOUSTIC MICROSCOPE (SPAM) FOR DETECTION OF SURFACE AND NEAR SURFACE DEFECTS IN CERAMIC MATERIAL.	17.0		2.0	OCT 84	OCT 84
M 83 6350 2972	CAPILLARY GAS CHROMATOGRAPHIC TEST OF ARMY SOLID PROPELLANTS NO PROGRESS REPORTED.	44.5			SEP 83	SEP 83
M 83 6350 2980	PORTABILITY OF TEST SOFTWARE FOR VHSIC CHIPS A PROJECT WORK DESCRIPTION, REQUEST FOR PROPOSAL WERE PREPARED. ALSO, THE CONTRACTOR BIDS HAVE BEEN EVALUATED.	90.0		2.0	DEC 83	DEC 83
M 83 6350 2981	FLUIDIC POWER SUPPLY ACCEPTANCE TESTER PURCHASE ORDERS HAVE BEEN PLACED FOR APPROXIMATELY 80 PERCENT OF THE MICROPROCESSOR HARDWARE AND PROGRAMMABLE VALVES.	150.0		43.0	JUL 85	JUL 85
M 83 6350 3001	NEW ACCEPTANCE TESTS F/CHEM AGENT RESIST OF URETHANE PAINTS A CONTRACT FOR THE CONDUCT OF THIS PROGRAM IS CURRENTLY BEING NEGOTIATED.	5.0			APR 84	APR 84
M 83 6350 3006	ACCUSTIC EMISSION MONITOR/CONTR OF GUN TUBE STRAIGHTENING THE PRELIMINARY TESTS PERFORMED PROVED HIGHLY SUCCESSFUL. THE EQUIPMENT HAS BEEN PURCHASED. THE SYSTEM HAS BEEN SET-UP. THE TEST AND EVENT PARAMETERS HAVE BEEN ESTABLISHED. THE AE CHARACTERISTICS OF THE GUN BARREL HAVE BEEN DETERMINED.	50.0		10.0	SEP 83	JAN 84
M 83 6350 3010	DIGITAL IMAGE AMPLIFICATION X-RAY SYSTEM ***** DELINQUENT STATUS REPORT *****					
M 83 6350 3011	PASSIVE/ACTIVE ROD TESTING TESTING OF THE FLASHLAMP PULSE FORMING NETWORK HAS BEGUN. THE FLASHLAMP HAS BEEN SUCCESSFULLY FIRED. LASER ACTION HAS BEEN ACHIEVED IN A NON-Q-SWITCHED PULSE WITH A FWHM OF 80 MSEC.	520.0	219.0	125.0	SEP 85	SEP 85
M 81 6390	MMT PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER ***** DELINQUENT STATUS REPORT *****				MAR 82	DEC 83



## TEST AND EVALUATION COMMAND (TECOM)

# TEST AND EVALUATION COMMAND

## CURRENT FUNDING STATUS, 1ST CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	* * CONTRACT ALLOCATED ( \$ )	* * FUNDING EXPENDED ( \$ )	* * INHOUSE REMAINING ( \$ )	* * FUNDING EXPENDED ( \$ )
81	1	765,000	0	0 ( 0%)	765,000	756,000 ( 98%)
82	1	726,000	0	0 ( 0%)	726,000	668,000 ( 92%)
83	1	438,000	0	0 ( 0%)	438,000	237,000 ( 54%)
TOTAL	3	1,929,000	0	0 ( 0%)	1,929,000	1,661,000 ( 86%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 0% INHOUSE REMAINING 100%



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0 81 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASK FOR INFORMATION.	765.0		756.0	DEC 83	DEC 83
0 81 5071 01	ACCEPTANCE TEST PROCEDURES *SEE SUBTASK 01 FY83 FOR DATA*				DEC 83	DEC 85
0 81 5071 10	TEST OPERATION PROCEDURES *SEE SUBTASK 10 FY83 FOR DATA*				DEC 83	DEC 85
0 81 5071 14	SMOKE OBSCURATION TEST PROCEDURES THE INVESTIGATION HAS BEEN COMPLETED + FINAL RPT WAS APPROVED BY HQ TECUM.					JUN 83
0 81 5071 37	ROLLOVER TEST OF MILITARY VEHICLES *SEE SUBTASK 37 FY83 FOR DATA*				DEC 83	DEC 85
0 81 5071 43	TEST AUTOMATION DEVELOPMENT SEE SUBTASK 43 FY83 FOR DATA.				DEC 83	DEC 83
0 81 5071 46	FERMENTATION METHODOLOGY THE 200-LITER FERMENTATION FACILITY WAS REACTIVATED SUCCESSFULLY IN WHICH MANY PARTS, PARTICULARLY GASKETS + PROBES + MEMBRANES WERE REPLACED.				DEC 83	JUN 83
0 81 5071 53	CLRTIFICATION OF LOOSE CARGO BOUNCE TEST THE INVESTIGATION HAS BEEN COMPLETED + THE FINAL RPT HAS BEEN SUBMITTED + APPROVED.				DEC 81	JUN 83
0 81 5071 57	GENERAL PURPOSE BIT SLICE MICRO-COMPUTER SEE SUBTASK 57 FY82.				DEC 83	DEC 84
0 81 5071 58	AIR VELOCITY INFLUENCES ON FUNGAL SPORE GERMINATION THE INVESTIGATION IS COMP. + THE FINAL RPT WAS APPROVED. BASED ON THIS INVESTIGATION, A TASK WILL BE INITIATED TO EVALUATE AIR VELOCITY EFFECTS ON FUNGAL MYCELIUM + SPORULATION.				DEC 83	JUN 83
0 81 5071 59	SOLAR POWERED INSTRUMENTATION VAN SEE SUBTASK 59 FY82.				DEC 83	DEC 84
0 81 5071 60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS SEE SUBTASK 60 FY83 FOR DATA.				DEC 83	DEC 85
0 81 5071 67	INTEROPERABILITY TEST METHODOLOGY SEE SUBTASK 67 FY83 FOR DATA.				DEC 83	JUN 83

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0 81 5071 71	CUPPER CRUSHER PRESSURE GAGES SEE SUBTASK 71 FY83 FOR DATA.				DEC 83	DEC 85
0 81 5071 73	INTEGRATED TEST DATA ACQUISITION THREE INTEGRATION TEST NETWORKS, EMPLOYING OPTICAL FIBER DATA LINKS HAVE BEEN BUILT. TWO OF THESE SYS. HAVE BEEN BENCH TESTED + HAVE HAD LIMITED FIELD TESTS. A THIRD PROTOTYPE IS BEING PREPARED FOR TEST.				DEC 83	DEC 83
0 81 5071 74	SMOKE SAMPLING/CHARACTERIZATION TESTS HAVE BEEN INITIATED TO ELIMINATE THE PROBLEM OF MOUNTED SAMPLER MOVEMENT ON EXPOSURE TO THE EXPLOSIVE SHOCK OF THE SMOKE ROUND. WIND TUNNEL TESTS FOR SAMPLING OIL, DIESEL OIL + IR OBSCURANT WERE COORDINATED. FINAL RPT WAS SUBMITTED + APPROVED.				DEC 83	DEC 83
0 81 5071 75	GENERAL SAMPLING TECHNOLOGY BASE ON THE INVESTIGATION WHICH REVEALED THAT RATE IS REQUIRED. THIS SUBTASK WAS CANCELLED.				DEC 83	JUN 83
0 81 5071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM SEE SUBTASK 76 FY82.				DEC 83	DEC 84
0 81 5071 77	ELECTROMAGNETIC RADIATION EFFECTS/SUSCEPTIBILITY OF ARMY MAT SEE SUBTASK 77 FY83 FOR DATA.				DEC 83	DEC 85
0 81 5071 78	AUTOMATION OF ANALYSIS OF EMI DATA THE FORMAT FOR INPUTTING EMI DATA TO THE DATA BASE HAS BEEN ESTABLISHED. TIME TO COST EST. FOR ADDING FREQ. ALLOCATION TO EQUIPMENT FILE (FAEF) DATA TO THE COMPUTER DATA BASE WAS DETERMINED. FOR FURTHER DETAILS REFER TO FINAL RPT.				DEC 83	JUN 83
0 81 5071 79	ENVIRONMENTAL ISSUES GUIDE FOR HUMID TROPIC TESTING THE BASIC MATRIX HAS BEEN DEVELOPED + COORDINATED WITH TOPOGRAPHIC LABS. THE PROGRAM CONCEPT FOR ENTERING RETRIEVING DATA IS COMPLETE. THE FINAL RPT. HAS BEEN WRITTEN + WILL BE SUBMITTED PENDING FINAL REVIEW.				DEC 83	DEC 83
0 81 5071 80	COMPUTER AIDED TEST PLANNING INITIAL DRAFTS HAVE BEEN COMPLETED FOR THE METHODOLOGY REPORT. THE FINAL RPT. WAS SUBMITTED TO TECOM IN DEC. 1982 + IS PENDING FINAL APPROVAL. THE CAT PLAN IS DUALY OPERATIONAL AS THE CENTRAL TOOL FOR PRODUCING USATTC DETAILED TEST PLANS.				DEC 83	DEC 83
0 81 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM SEE SUBTASK 96 FY82.					DEC 84

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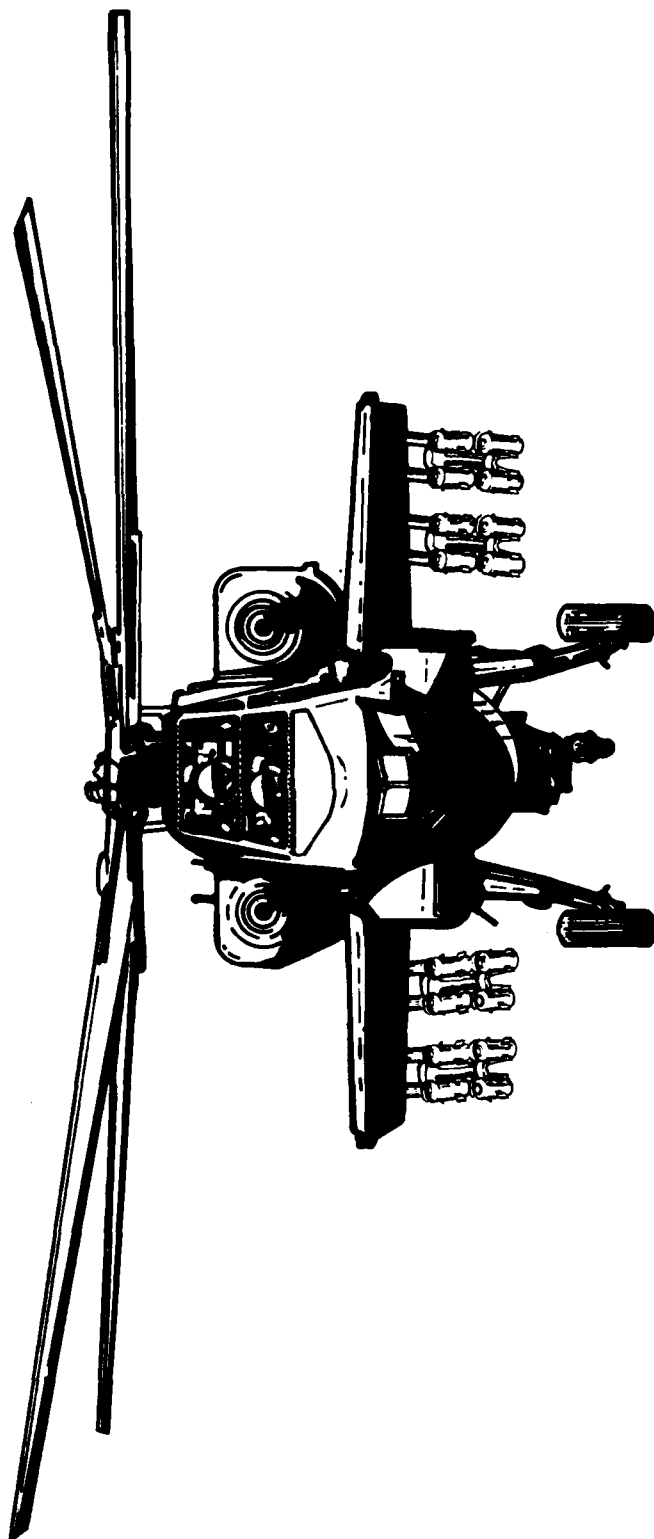
PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
0 82 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES *SEE INDIVIDUAL SUBTASK FOR INFORMATION.	726.0		668.0	DEC 84	DEC 84
0 82 5071 01	ACCEPTANCE TEST PROCEDURES *SEE SUBTASK 01 FY83 FOR DATA*				DEC 84	DEC 85
0 82 5071 10	TEST OPERATIONS PROCEDURES *SEE SUBTASK 10 FY83 FOR DATA*				DEC 84	DEC 85
0 82 5071 100	AUTO PARTICLE CONTAMINATION MEAS IN HYDRAULIC OIL AFTER TRYING DIESEL FUEL, LUB OIL, HYDRAULIC FLUID GIVES THE MOST CONSISTENT RESULTS + WILL BE USED AS THE BASE OIL FOR DILUTION OF SMALL SAMPLES OF CONTAMINANT OIL.				DEC 84	DEC 84
0 82 5071 101	GENERAL PURPOSE TRANSPORTABILITY TEST AREA THE MTD DIVISIONS MOST INVOLVED IN TRANSPORTABILITY TESTING WERE IDENTIFIED. THE REQUIREMENT STATEMENT WAS PREPARED. PROCEDURES WEE DEVELOPED FOR OBTAINING ASSISTANCE FROM MTMCTEA RELATIVE TO TESTING OF ITEMS FOR TRANSPORTABILITY.				DEC 84	DEC 84
0 82 5071 37	ROLLOVER TEST OF MILITARY VEHICLES *SEE SUBTASK 37 FY83 FOR DATA*					DEC 85
0 82 5071 43	TEST AUTOMATION SEE SUBTASK 43 FY83 FOR DATA.					DEC 85
0 82 5071 57	GENERAL PURPOSE BIT SLICE MICROCOMPUTER THE GENERAL PURPOSE BIT-SLICE MICROCOMPUTER INTERFACE IS COMPLETE + RESIDES IN THE DATA GENERAL ECLIPSE SL250 MINICOMPUTER AND DATA GENERAL ECLIPSE SL130 MINICOMPUTER. THE FINAL RPT. FOR THE INVESTIGATION IS IN PREPARATION.					DEC 84
0 82 5071 59	SOLAR POWERED INSTRUMENTATION VAN THE 3KW, 30KW HR. SOLAR CELL PWR. SYS. HAS BEEN DELIVERED TO MSMR FROM DOE FOR USE WITH INSTRUMENTATION VAN. THE SCPS AND INSTRUMENTATION VAN ARE UNDERGOING EVAL. THE EVAL. WILL EXTEND INTO FY84.					DEC 84
0 82 5071 67	INTEROPERABILITY TEST METHODOLOGY SEE SUBTASK 67 FY83 FOR DATA.					JUN 83
0 82 5071 71	COPPER CRUSHER PRESSURE GAGES SEE SUBTASK 71 FY83 FOR DATA.					DEC 85
0 82 5071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM A MAJOR PORTION OF THE GAMMA DOSIMETRY PROCESSED DURING FY82 WAS IN PRODUCTION SUPPORT OF THE M1 ABRAMS + BFU SYS. A MAJOR PORTION OF FY83 WORK WILL BE DEVOTED TO PLACING IN ROUTINE OPERATION MICRODOSIMETRY FOR LINAC TESTING.					DEC 84

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0 82 5071 77	ELECTROMAGNETIC RADIATION EFFECTS + SUSCEPTIBILITY OF ARMY M SEE SUBTASK 77 FY83 FOR DATA.					DEC 85
0 82 5071 81	BINARY MUNITIONS PRODUCTION TEST METHODOLOGY SEE SUBTASK 81 FY83 FOR DATA.					DEC 85
0 82 5071 90	TOXIC GAS ANAL BY GAS CHROMATOGRAPHY THE PROTOTYPE HEATING FLUSHING SYS. WAS MODIFIED. THE IMPROVED SYS. WILL ELIMINATE SMALL LEAKS WHICH OCCUR WHEN PROTOTYPE IS UNDER HIGH VACUUM. AN ANALYZER, BASED ON AN AVAILABLE LABORATORY INFRARED SPECTROPHOTOMETER WAS BUILT.				DEC 84	DEC 84
0 82 5071 92	EFFECTS OF RAIN + VEGETATION ON FUZES + IMPACT SWITCHES PROGRESS ON THIS SUBTASK HAS BEEN DELAYED DUE TO FUNDING RESTRAINTS.					JUN 84
0 82 5071 95	RAPID EVALUATION OF ENVIRONMENTAL HAZARDS SEE SUBTASK 95 FY83 FOR DATA.					DEC 85
0 82 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM FIELD DATA WAS ACQUIRED + STATISTICALLY EVALUATED. MODIFIED CAL. TECH. HAVE BEEN PROPOSED INCLUDING INSTRUMENTATION PROCEDURES AND DATA REDUCTION TECH. THIS PROJECT IS CURRENTLY ON HOLD AWAITING FY84 FUNDING.					DEC 84
0 82 5071 97	IMP METH FOR PERFORMANCE TESTING MORTARS AT EXTREME TEMP AS A RESULT OF MEETINGS WITH ARTILLERY WEAPONS SPECIALISTS, PRELIM. CHAMBER DESIGN HAS BEEN DEVELOPED. PENDING FURTHER FUNDS, THE CHAMBER WILL BE FAB. FROM WOOD TO VERIFY THE DIMENSIONS + INTERIOR CLEARANCES REQUIRED FOR GUN CREW PERSONNEL.				DEC 84	DEC 84
0 83 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES *SEE INDIVIDUAL SUBTASK FOR INFORMATION*	438.0		237.0	DEC 85	DEC 85
0 83 5071 01	ACCEPTANCE TEST PROCEDURES THE CENTRAL LIBRARY FOR THE TOTAL ATP PROGRAM WAS MAINTAINED. THE MASTER ATP INDEX + THE ATP INDEX SUPPLEMENTS WERE PUBLISHED + DISTRIBUTED.				DEC 85	DEC 85
0 83 5071 10	TEST OPERATIONS PROCEDURES A TOTAL OF 29 TUPS HAVE BEEN FINALIZED DURING THIS PERIOD.				DEC 85	DEC 85
0 83 5071 37	ROLL-OVER TESTS OF MILITARY VEHICLES THE FIRST PHASE OF THIS INVESTIGATION WAS COMPLETED BY VARGAS RESEARCH, INC. THE RPT. REVEALED, 5 TYPES OF ARMY VEHICLES WERE IDENTIFIED AS HAVING A HIGH TURN OVER HISTORY WHEN INVOLVED IN EMERGENCY MANEUVERS. THE SECOND PHASE IS ON-GOING.				DEC 85	DEC 85

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0 83 5071 43	TEST AUTOMATION SEVERAL PROJECTS WITHIN THIS SUBTASK HAVE BEEN COMPLETED SOME OF THE SUBTASKS ARE AVIONICS TEST, ANTENNA PATTERN, DIGITAL COMM., TO NAME A FEW.					DEC 85
0 83 5071 60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS THE FIRST PHASE OF THE ROC METHODOLOGY INVESTIGATION HAS BEEN COMPLETED. THE INVESTIGATION IS IN SUSPENSION UNTIL EQUIPMENT IS PURCHASED THROUGH THE INSTRUMENTATION ACQUISITION PROGRAM IN FY84.					DEC 85
0 83 5071 67	INTEROPERABILITY TEST METHODOLOGY TESTING HAS BEEN COMPLETED AND THE FINAL REPORT WILL BE SUBMITTED IN OCT 83.				JUN 83	JUN 83
0 83 5071 71	IMPROVED COPPER CRUSHER PRESSURE GAGES THE INTERNAL BALLISTICS DIV., BRL, HAS COMPLETED ITS ANALYSIS OF THE GAGE PARAMETERS USING FINITE ELEMENTS AS ITS MEANS OF ANALYSIS + AN INITIAL DESIGN HAS BEEN COMP. FURTHER WORK ON THIS TASK CANNOT BE ACCOMPLISHED DUE TO LACK OF FY83 FUNDS.					DEC 85
0 83 5071 77	ELECTROMAGNETIC RADIATION EFFECTS + SUSCEPTIBILITY OF ARMY MAT SEVERAL METHODS HAVE BEEN INVESTIGATED FOR USING THE EHRE FAC. FIBER OPTICS DATA LINKS FOR OPSEC COMM + AUTOMATED CONTROL OF TEST ITEM FUNCTION WAS DONE. AT PRESENT, CONTINUING WORK HAS BEEN SUSPENDED DUE TO REDUCTIONS IN FY83 FUNDING.					DEC 85
0 83 5071 81	BINARY MUNITION PRODUCTION TEST METHODOLOGY - AUTOTECHNICIAN THIS TASK HAS BEEN DELAYED DUE TO LACK OF FY83 FUNDS.					DEC 85
0 83 5071 95	RAPID DETERMINATION OF ENVIRONMENTAL HAZARDS WORK CONTINUED ON THE PREPARATION OF A COMPREHENSIVE REPORT DEALING WITH RATE + PERSISTENCE OF GB + VX IN SOIL, WATER, + VEGETATION. THE FIRST DRAFT IS COMPLETE. WORK IS CONTINUING ON THE TASK. LACK OF FY83 FUNDS HAS DELAYED THIS PROJECT.					DEC 85



**AVIATION  
RESEARCH AND DEVELOPMENT COMMAND  
(AVRADCOM)**

**AND**

**TROOP SUPPORT AND AVIATION  
MATERIEL READINESS COMMAND  
(TSARCOM)**

AVIATION R+D COMMAND AND TROOP SUPPORT AND AVIATION MR COMMAND  
CURRENT FUNDING STATUS, 1ST CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	* * C O N T R A C T A L L O C A T E D ( \$ )	* * F U N D I N G E X P E N D E D ( \$ )	* * I N H O U S E R E M A I N I N G ( \$ )	* * F U N D I N G E X P E N D E D ( \$ )
79	1	398,700	350,000	9,100 ( 2%)	48,700	49,000 (100%)
80	2	260,000	204,700	92,500 ( 45%)	55,300	55,300 (100%)
81	13	2,143,000	1,448,600	949,900 ( 65%)	694,400	670,800 ( 96%)
82	22	20,853,300	17,809,600	9,507,700 ( 53%)	3,043,700	1,197,700 ( 39%)
83	6	1,246,500	440,000	0 ( 0%)	806,500	107,400 ( 13%)
TOTAL	44	24,901,500	20,252,900	10,559,200 ( 52%)	4,648,600	2,080,200 ( 44%)
AUTHORIZED FUNDING			CONTRACT ALLOCATED 81%		INHOUSE REMAINING 18%	

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1 81 7036	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES COIN AND TWIST DIE IS BEING ADJUSTED TO CORRECT BLADE ANGLE.	185.0	124.4	58.0	NOV 82	JUN 84
1 81 7108	MANUFACTURING TECHNIQUES FOR TRANSMISSION SHAFT SEALS ***** DELINQUENT STATUS REPORT *****				JUN 82	DEC 83
1 82 7119	NON-DESTRUCTIVE EVALUATION TECH FOR COMPOSITE STRUCTURES PART II OF THE HANDBOOK ON PHYSICOCHEMICAL CHARACTERIZATION TECHNIQUES WAS COMPLETED. REVIEWS OF LIQUID CHROMATOGRAPHY, REAL TIME THERMOGRAPHY, ULTRASONIC, AND ACOUSTIC EMISSION QC TECHNIQUES, AND OF THE QC OF THE AH-1 BLADE ARE IN PROCESS.	450.0	127.0	260.5	NOV 83	JUN 84
1 81 7143	CERAMIC GAS PATH SEAL-HIGH PRESSURE TURBINE ***** DELINQUENT STATUS REPORT *****				FEB 83	DEC 83
1 82 7143	CERAMIC HIGH-PRESSURE GAS PATH SEAL ***** DELINQUENT STATUS REPORT *****				FEB 83	DEC 83
1 80 7155	COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS ALL EQUIPMENT IS READY TO GO AT INTERNATIONAL HARVESTERS HINSDALE IL PLANT.	200.0	162.0	38.0	JUL 81	JAN 85
1 81 7155	COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS ALL EQUIPMENT IS INSTALLED, CHECKED OUT AND READY TO GO AT INTERNATIONAL HARVESTERS HINSDALE, IL PLANT.	320.0	228.0	94.0	MAR 84	JAN 85
1 80 7156	ULTRASONIC ASSISTED MACHINING FOR SUPERALLOYS ARRANGEMENTS BEING MADE TO SHIP EQUIPMENT TO ACME CORPORATION.	60.0	42.7	17.3	APR 81	DEC 83
1 82 7197	FABRICATION OF INTEGRAL ROTORS BY JOINING MACHINING OF ROTORS FOR ENGINE TESTING COMPLETE. CRACK GROWTH DATA GENERATION FOR ALL CAP AND HIP MATERIAL TO SUBSTANTIATE ROTOR LIFE IN ACCORDANCE WITH INSPECTION GUIDELINES IN PROGRESS.	317.0	290.5	26.0	SEP 82	JCT 83
1 81 7200	COMPOSITE ENGINE INLET PARTICLE SEPARATOR ALL TECHNICAL WORK IS COMPLETED. THE FINAL TECHNICAL REPORT WILL BE COMPLETED IN JULY 1983.	500.0	347.5	150.0	OCT 81	JUL 83
1 81 7202	APPLICATION OF THERMOPLASTICS TO HELICOPTER SECONDARY STRUC FINAL ASSEMBLY OF THE PROTOTYPE DOORS WAS COMPLETED. RESULTS OF STRUCTURAL TESTS DEMONSTRATED GOOD STRUCTURAL PROPERTIES. IMPLEMENTATION PLANS CONSIST OF FLIGHT TESTING OF THE CH-47 ENGINE ACCESS DOOR ASSEMBLY PENDING SAFETY-OF-FLIGHT RELEASE.	185.0	128.7	46.0	OCT 81	DEC 83
1 79 7238	PRECISION FORGED ALUMINUM POWDER METALLURGY BASED ON TECHNICAL PROBLEMS, UNSATISFACTORY FORGING RESULTS AND UNAVAILABILITY OF FUNDS TO MEET ORIGINAL GOALS THE AIR FORCE AND ARMY DECIDED IN THE BEST INTEREST OF THE GOVERNMENT TO TERMINATE THE CONTRACT. CONTRACTOR IS TO PREPARE A FINAL REPORT.	398.7	350.0	49.0	APR 81	DEC 83



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1 82 7241	HOT ISOSTATIC PRESSED TITANIUM CASTINGS CONTRACT MODIFIED FEB 23 1983 TO QUALIFY FOR PRODUCTION OF LOWER COST BLACKHAWK DAMPER BRACKET USING HIP AND HEAT TREATED TITANIUM INVESTMENT CASTING. THIS BRACKET WILL BE INTERCHANGEABLE WITH THE PRESENT FORGED BRACKET.	450.0	309.0	37.0	JAN 83	OCT 84
1 81 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACTOR PROGRESS HAS BEEN DELAYED DUE TO WORK LOAD, MELTING STOCK AVAILABILITY AND MOLD FACE COAT COMPOSITION PROBLEMS.	174.0	120.0	54.0	OCT 81	DEC 83
1 82 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACT PROGRESS HAS BEEN DELAYED DUE TO WORK LOAD, MELTING STOCK AVAILABILITY AND SUB CONTRACTOR DELAYS.	350.0	311.9	34.1	MAR 84	MAY 84
1 82 7286	HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS CONTRACT AWARDED IN NOVEMBER, 1982. EFFORT INITIATED WITH INGOT PROCESSING BY ELECTRON BEAM REMELT.	360.0	300.0	40.0	APR 85	JAN 85
1 81 7288	HMT DETERMINATION OF OPTIMAL CURING CONDITIONS PREPREG E-GLASS AND S-2 GLASS/EPOXY FORMULATIONS WERE AUTOCLAVE CURED TO UNDER, STANDARD, AND POSTCURE CONDITIONS. SPECIMENS FROM EACH CONDITION ARE BEING TESTED MECHANICALLY AND CHEMICALLY (FOURIER TRANSFORMATION INFRARED SPECTROSCOPY).	175.0		175.0	AUG 82	DEC 83
1 81 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER AFTER DELAY REQUESTED BY VENDOR, SUBCONTRACTOR HAS COMPLETED A COMPLETE REDESIGN AND FABRICATION OF NEW FLUID DIES TO MAKE IMPELLERS. CONSOLIDATION IS NOW ADEQUATE, AND PROGRAM CONTINUING AS OF 1 MAY 83.	229.0	200.0	29.0	JAN 83	DEC 84
1 82 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER NO WORK ACCOMPLISHED THIS REPORTING PERIOD. TECHNICAL PROBLEMS WITH PRIOR YEAR FUNDS HAVE DELAYED FY82 WORK. PROPOSAL FOR FY82 FUNDS DUE JUL 83 TO BE OBLIGATED PRIOR TO 30 SEP 83.	275.0			MAR 84	AUG 85
1 81 7298	HIGH TEMPERATURE VACUUM CARBURIZING INITIAL PROCESS DEVELOPMENT HAS BEEN COMPLETED. METALLURGICAL EXAMINATIONS WERE PERFORMED ON THREE TEST 9310 STEEL SLUGS. CARBURIZATION REQUIREMENTS WERE SATISFACTORY, BUT MICROSTRUCTURAL PROPERTY RESULTS DICTATED CHANGES TO THE CARBURIZATION PROCESS	75.0	50.0	14.8	DEC 81	SEP 83
1 82 7298	HIGH TEMPERATURE VACUUM CARBURIZING APPROXIMATELY 75 PCT OF THE 9310 STEEL GEAR ROLLER SPECIMENS HAVE BEEN TESTED. METALLURGICAL EVALUATION REVEALED UNACCEPTABLE MICROSTRUCTURAL CHARACTERISTICS. NEW TEST SAMPLES AT DIFFERENT HEAT TREATMENT PARAMETERS HAVE BEEN PREPARED.	240.0	180.5	24.5	APR 83	SEP 83

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1 83 7298	HIGH TEMPERATURE VACUUM CARBURIZING AN ADDITIONAL 53K HAS BEEN REQUESTED TO SUPPLEMENT FY83 FUNDS TO MEET PHASE 2 CONTRACT COST REQUIREMENTS. AS FUNDING IS PROVIDED INCREMENTALLY, NO DELAYS ARE ANTICIPATED.	375.5	340.0	24.9	SEP 84	SEP 84
1 82 7300	IMPROVED LOW CYCLE FATIGUE CAST ROTORS MATERIAL SCREENING TESTING COMPLETE AND FINAL PROCESS SELECTED. CASTING VENDOR PRODUCING NEXT LOT OF CASTINGS FOR MATERIAL TEST EVALUATION AND FIELD ENGINE TESTING.	480.0	425.0	45.0	JUN 85	APR 85
1 81 7319	PROD METH F/DIGITAL ADDRESSABLE MULTI-LEGEND DISPLAY SWITCH ***** DELINQUENT STATUS REPORT *****				OCT 83	DEC 84
1 82 7322	LOW-COST TRANSPIRATION-COOLED COMBUSTOR LINER WORK CONTINUING ON SCHEDULE. 4000 AMP PULSE RECTIFIER HAS BEEN PURCHASED BY DDA VARIOUS PARAMETERS WHICH AFFECT ETCHING RATES AND QUALITY OF PATTERN ARE BEING EVALUATED TO SPEED FABRICATION AND REDUCE COST. SHEETS PLACED IN METAL BAG IMPROVES QUALITY.	530.0	460.0	55.0	MAR 85	AUG 84
1 82 7340	COMPOSITE MAIN ROTOR BLADE WORK WAS CONDUCTED TO RESOLVE THE VIBRATION PROBLEM. A RESOLUTION OF THE PROBLEM WAS NOT ACHIEVED BEFORE MT FUNDING WAS EXPENDED. A DRAFT FINAL TECHNICAL REPORT HAS BEEN PREPARED, AND IS BEING REVIEWED.	1,200.0	1,052.0	148.0	NOV 82	DEC 83
1 82 7342	PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES A REPLY TO THE STOP WORK ORDER HAS NOT BEEN RECEIVED FROM THE CONTRACTOR, BUT IS EXPECTED BEFORE 25 JANUARY 1984. WORK WAS TERMINATED BECAUSE THE CONTRACTOR DECIDED AGAINST THE PURCHASE OF A PULTRUDER, AND BECAUSE THE ARMY WOULD NOT IMPLEMENT.	93.0	67.0	21.4	APR 84	DEC 83
1 81 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES A TECHNICAL REPORT IS BEING PREPARED THAT WILL PRESENT THE PHASE 1, FY81 WORK ACCOMPLISHED.	300.0	250.0	50.0	OCT 81	SEP 83
1 82 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES AFTER A REVIEW OF PHASE 1 RESULTS, APPROVAL WAS GRANTED TO PROCEED WITH PHASE 2. FABRICATION OF A FULL SCALE DIAMETER, ONE-HALF LENGTH SHAFT WAS INITIATED.	325.0	250.0	60.0	SEP 83	JUL 84
1 82 7366	SPIRAL SELF-ACTING SEALS RFP HAS BEEN PREPARED.	370.0	302.6	65.0	DEC 86	
1 82 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) WORK CONTINUED ON THE XIM PORTION OF IBIS. ACQUISITION AND FAB. ON SOME XIM HARDWARE HAS BEEN ACCOMPLISHED. DEVELOPMENT OF COMPUTATIONAL SOFTWARE CONTINUES WHICH ARE USED IN DETECTING AND ANALYZING FLAWS.	500.0	475.0	8.0	SEP 84	SEP 84

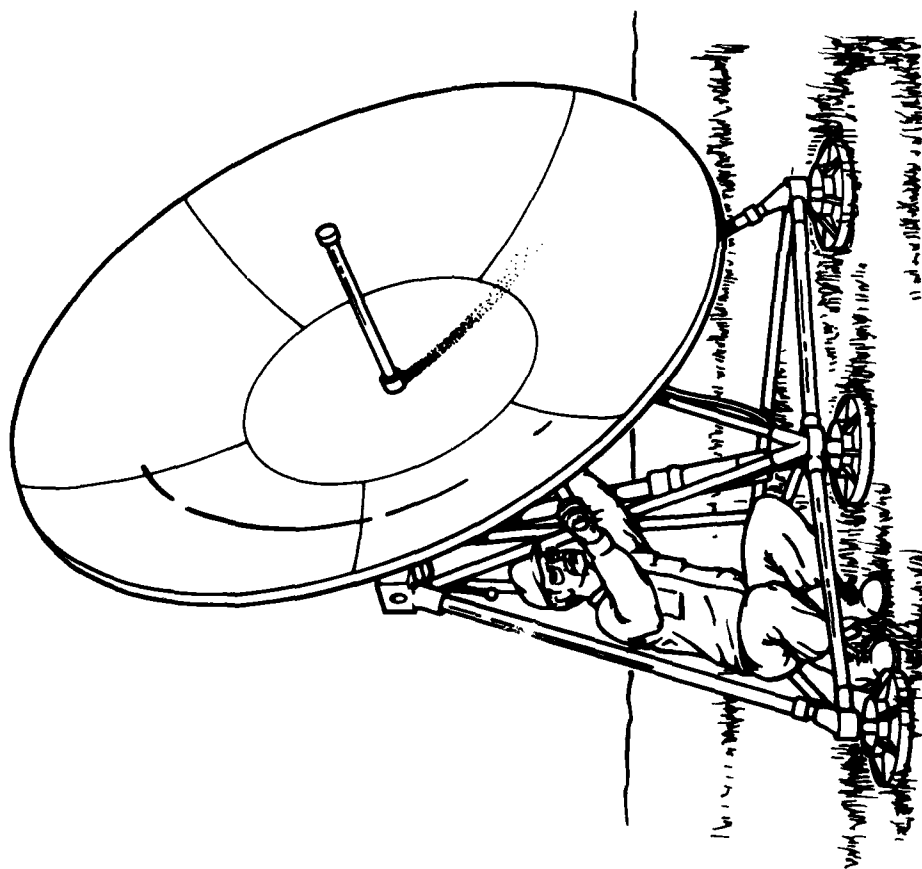
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1 81 7376	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS ***** DELINQUENT STATUS REPORT *****				DEC 84	DEC 83
1 82 7376	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS FINAL INSPECTION PROCESS HAS BEEN DEMONSTRATED. IN-PROCESS INSPECTION PROCESS DEVELOPMENT IS UNDERWAY. ORIGINALLY SPECIFIED COMPUTER HARDWARE WAS INSUFFICIENT AND A LARGER UNIT IS BEING PROCURED.	1,012.0	939.6	52.6	JUN 85	MAY 85
1 82 7382	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A FABRICATION OF THE 5 SHORT SPAR SECTIONS HAS BEEN COMPLETED, AND BALLISTIC AND PROCESS VERIFICATION TESTING HAS BEEN INITIATED. CONTRACT IS BEING MODIFIED TO ELIMINATE COCURED BLADE PROCESS IN FAVOR OF A PRECURED SPAR CONCEPT.	2,895.3	2,775.3	120.0	JUN 83	SEP 83
1 83 7382	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A THE CONTRACT WAS AWARDED. CONTRACTUAL FUNDS HAVE NOT BEEN OBLIGATED.	446.0		50.5	SEP 84	SEP 84
1 83 7389	PRODUCTION OF ALUMINUM AIRFRAME COMP (SUPERPLASTIC FORMING) NO WORK HAS BEEN ACCOMPLISHED WITH THIS YEARS FUNDING TO DATE.	125.0	100.0	7.0	MAR 85	MAR 85
1 82 7412	INFRARED DETECTOR FOR LASER WARNING RECEIVER SOLE SOURCE CONTRACT LET TO PERKIN-ELMER CONFIRMATORY AND PILOT RUN SAMPLES INDICATE A YIELD FROM 20 TO 70 PERCENT. THESE INAS IR DETECTORS WILL BE USED IN THE AN/AVR-2 PROGRAM. WILL BUILD AND TEST INTERDIGITATED IR DETECTORS FOR AN/AVR-2 PROGRAM.	250.0	216.0	34.0	JUN 82	DEC 83
1 82 7415	MNT T700 BLISK REPAIR GE HAS OBTAINED 26 BLISKS. WELDING OPERATIONS HAVE BEEN DEFINED. THE HEAT TREAT CYCLE HAS BEEN SELECTED. CORROSION AND HIGH CYCLE FATIGUE TEST PLANS HAVE BEEN FORMULATED. DESIGN OF TOOLING FOR WELD AND HEAT TREAT IS COMPLETE AND ON ORDER.	900.0	602.2	119.6	MAR 85	JUN 85
1 82 7426	MNT-IPI PROGRAM-MARTIN MARIETTA TADS/PNVS ***** DELINQUENT STATUS REPORT *****					
1 83 7427	ATTACK HELICOPTER PRODUCTIVITY IMPROVEMENT (API) PROGRAM --- JUST FUNDED. NG 301 REQUIRED. ---					
1 83 7433	MNT - IPI PGM - BELL HELICOPTER, INC. - AHIP --- JUST FUNDED. NG 301 REQUIRED. ---					
1 83 7465	ADVANCED COMPOSITE SENSOR SUPPORT STRUCTURE (ACS-3) A PROCUREMENT PACKAGE IS IN PREPARATION.	300.0		25.0	APR 84	APR 84

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		AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
7 82 8190	IMPRVD CUTTER LIFE, T-700 COMP BLISK/IMPELLER MILLING OPER STATISTICALLY DESIGNED EXPERIMENTS HAVE IDENTIFIED A POTENTIALLY OPTIMUM COMBINATION OF TOOL MATERIAL AND GEOMETRY, AND FEEDS AND SPEEDS. VERIFICATION TESTING WILL BE CONDUCTED.	486.0	426.0	20.0	DEC 83	DEC 83
7 82 8192	TURBINE ENGINE PRODUCTIVITY IMPROVEMENT PROJECT IS PROCEEDING ON SCHEDULE WITH NO SLIPPAGE ANTICIPATED. OPERATIONAL SORTING NETWORK SYSTEM USE FOR GROUP CLASSIFICATION. METALWATS SYSTEM USED FOR COMPUTER GENERATION OF ROUTINGS AND TIME STANDARDS.	9,370.0	8,300.0		MAR 84	MAR 84



## COMMUNICATIONS AND ELECTRONICS COMMAND (CECOM)

COMMUNICATIONS + ELECTRONICS COMMAND

CURRENT FUNDING STATUS, 1ST CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	* * C O N T R A C T F U N D I N G A L L O C A T E D ( \$ )	* * E X P E N D E D ( \$ )	* * I N H O U S E F U N D I N G R E M A I N I N G ( \$ )	* * E X P E N D E D ( \$ )
78	1	314,500	292,500	158,800 ( 54%)	22,000	22,000 (100%)
79	1	550,000	497,000	450,000 ( 90%)	53,000	58,000 (109%)
80	1	780,000	706,000	516,800 ( 73%)	74,000	73,500 ( 99%)
81	4	3,770,400	3,501,800	1,497,400 ( 42%)	268,600	196,100 ( 73%)
82	2	2,040,000	881,500	300,000 ( 34%)	1,158,500	83,800 ( 7%)
83	2	1,269,000	210,000	34,200 ( 16%)	1,059,000	0 ( 0%)
TOTAL	11	8,723,900	6,088,800	2,957,200 ( 48%)	2,635,100	433,400 ( 16%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 70% INHOUSE REMAINING 30%

AD-A136 113

MANUFACTURING METHODS & TECHNOLOGY PROJECT EXECUTION  
REPORT FIRST CY 83(U) ARMY INDUSTRIAL BASE ENGINEERING  
ACTIVITY ROCK ISLAND IL C FULLER NOV 83

2/2

UNCLASSIFIED

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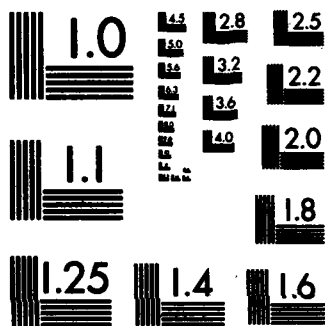
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**FIGURE 1**

**2-3-4**

OTAC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

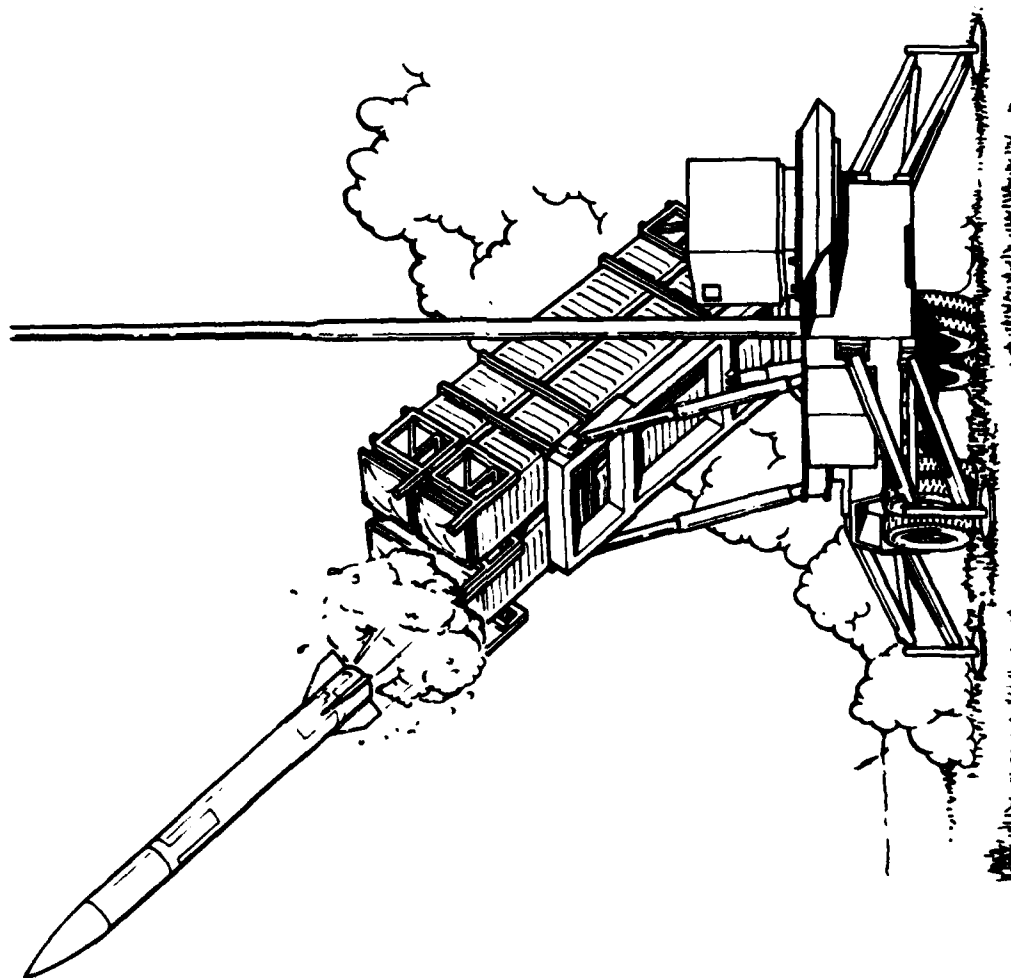


MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
SUMMARY PROJECT STATUS REPORT  
1ST SEMIANNUAL SUBMISSION CY 83 RCS DRMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
F 81 3050	EPITAXY OF III-V SEMICONDUCTOR PHOTODETECTORS RCA OF CANADA CONTRACTED THRU CANADIAN COMMERCIAL CORP TO ESTABLISH METHODS FOR MAKING PHOTODETECTOR MODULES FOR AN-GAC-1 LONG HAUL AND AN-TYC-39 LOCAL FIBER OPTIC COMMUNICATIONS SYSTEMS. WILL USE LIQUID OR VAPOR PHASE EPITAXY OF IN-GA-AS-P.	670.0	588.2	9.6	DEC 83	AUG 85
F 80 3054	PRODUCTION METHODS FOR MULTI-LAYER FOLDED CIRCUITS HUGHES COMPLETED TESTING RIGID-FLEX CIRCUIT BOARD SAMPLES WITH POSITIVE RESULTS. BOARD FABRICATION NOW DELAYED DUE TO EPROM REPROGRAMMING. GOALS ARE TO AUTOMATE RIGID-FLEX BOARD MANUFACTURE, SELECT COMPATIBLE MATERIALS, AND CREATE PROCESS SPECS.	780.0	706.0	73.5	SEP 82	JAN 84
F 81 3056	ELECTROLUMINESCENT NUMERIC MODULES ROCKWELL INSTALLED 18 IN. + 24 IN. THIN FILM VACUUM DEPOSITION CHAMBERS FOR ELECTROLUMINESCENT NUMERIC DISPLAY MODULES. DECODER-DRIVER CHIPS FROM TELMOS ARE 2 MONTHS BEHIND SCHEDULE. EXERCISER DELIVERY TO CONCUR WITH DELIVERY OF ENGR. SAMPLES.	771.9	662.8	109.0	DEC 82	APR 84
F 81 3057	HIGH STABILITY VIBRATION RESISTANT QUARTZ CRYSTALS FREQUENCY ELECTRONICS IS BUILDING A PILOT LINE FOR 5 MHZ SC CUT QUARTZ CRYSTALS IN CERAMIC FLATPACKS. AUTOMATIC X-RAY, CUT + GRIND ANGLE CORRECTION, + PARALLEL GAP WELDING WERE DEVELOPED. BAKE + SEAL STAGE FOR 40 UNITS WAS DESIGNED. PLATING TESTED OK	1,261.3	1,193.6	67.5	JUL 83	FEB 85
F 83 3068	INCREASE PRODUCTIBILITY OF VARACTORS AND PIN DIODES GAAS VARACTOR CHIP DESIGN REQUIREMENTS HAVE BEEN FINALIZED. EPITAXIAL DOPANT CURVE WAS DEVELOPED. SILICON PIN DIODE MATERIALS WERE ORDERED, PROCESS FLOW SHEET WAS COMPLETED AND THE MESA ETCHES ARE CHARACTERIZED. CONTRACT AWARDED TO MICROWAVE ASSOC.	215.0	210.0		JUL 85	JUL 85
F 82 3073	TACTICAL GRAPHICS DISPLAY PANEL GTE CORP EXPERIENCED ROW SHORTING PROBLEMS IN FABRICATING 10X12.5 IN. THIN FILM ELECTROLUMINESCENT DISPLAY PANELS. DIAGNOSTIC TESTS ARE UNDER WAY. DRIVE ELECTRONICS ALMOST COMPLETE AND TESTING HAS BEGUN. PILOT LINE PRODUCING 10 PANELS A DAY IS GOAL.	950.0	881.5	39.8	OCT 84	OCT 84
F 82 3083	MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM) A CONTRACT WAS AWARDED TO MICROWAVE ASSOCIATES TO ESTABLISH A CAPABILITY TO BUILD INTEGRATED MM WAVE FRONT END TRANSMIT-RECEIVE MODULES. WILL INCLUDE TRANSMITTER SOURCE, BITE TEST COUPLER, TRANSMITTER POWER ATTENUATOR, FILTER, MIXER, SOURCE + PREAMP.	1,090.0		44.0	JUN 84	SEP 85
F 83 3094	COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS CONTRACTS WILL BE AWARDED TO SINGER-KEARFOOT AND ROCKWELL-COLLINS TO ANALYZE THEIR MANUFACTURING OPERATIONS TO IDENTIFY AREAS NEEDING UPGRADING. PHASE 2 WILL INCLUDE ESTABLISHING AND DEMONSTRATING NEW CAPITAL EQUIPMENT AND TECHNIQUES.	1,054.0			SEP 84	SEP 84

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PROJ NU.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
F 81 9651	TACTICAL MINIATURE CRYSTAL OSCILLATORS BENDIX DEFINED BRAZING, BONDING, CLEANING, OUTGASSING, + SEALING PROCESSES FOR A 1 CU IN. THXO. VACUUM ANALYSIS + A CRYSTAL TEMPERATURE SLEW TEST STATION WERE COMPLETED. TEST FIXTURE CONSTRUCTION HAS BEGUN. HYBRID CIRCUIT FABRICATION HAS STARTED.	1,067.2	1,057.2	10.0	MAR 84	FEB 85
2 78 9898	RUGGEDIZED TACTICAL FIBER OPTIC CABLES PILOT PRODUCTION OF THE MILITARY FIBER OPTIC CABLES IS CURRENTLY ONGOING. CONTRACTUAL AGREEMENTS ON DEVICE SPECIFICATION HAVE BEEN MADE. A FULL 6-PART MILITARY SPECIFICATION WAS JOINTLY GENERATED.	314.5	292.5	22.0	NOV 79	OCT 83
F 79 9938	THREE COLOR LIGHT EMITTING DIODE DISPLAY UNIT THIS EFFORT IS COMPLETE EXCEPT FOR THE INDUSTRY DEMONSTRATION AND A FINAL REPORT. THE DEMONSTRATION AND FINAL REPORT SHOULD BE COMPLETED BY THE END OF AUGUST 1983.	550.0	497.0	58.0	SEP 81	AUG 83



**MISSILE COMMAND  
(MICOM)**

**M I S S I L E C O M M A N D**  
**CURRENT FUNDING STATUS, 1ST CY83**

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	C O N T R A C T A L L O C A T E D ( \$ )	F U N D I N G E X P E N D E D ( \$ )	I N H O U S E R E M A I N I N G ( \$ )	F U N D I N G E X P E N D E D ( \$ )
79	1	400,000	200,000	200,000 (100%)	200,000	200,000 (100%)
80	2	300,000	298,800	294,400 ( 98%)	1,200	1,200 (100%)
81	9	5,977,000	4,728,000	4,391,800 ( 92%)	1,249,000	1,135,300 ( 90%)
82	12	7,349,500	5,170,200	3,295,300 ( 63%)	2,179,300	977,800 ( 44%)
83	8	3,330,000	1,848,700	478,500 ( 25%)	1,481,300	67,700 ( 4%)
TOTAL	32	17,356,500	12,245,700	8,660,000 ( 70%)	5,110,800	2,382,000 ( 46%)

AUTHORIZED FUNDING	CONTRACT ALLOCATED 71%	INHOUSE REMAINING 29%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 81 1042	PRODUCTION OF COMPOSITE RADOME STRUCTURES THE PDR RATE OF THE ROVING SATURATION EQUIPMENT WAS INCREASED. PROCESS PLANS AND TOOLING DESIGNS WERE ESTABLISHED. TOOLING WAS FABRICATED. FUNDS WILL BE REPROGRAMMED TO ALSO AWARD A CONTRACT TO FMI FOR PDR PROVEDOUT OF THEIR SINGLE LAYER DESIGN.	755.0	542.7	122.5	SEP 83	SEP 83
3 81 1051	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS TASK 1 OF THE FOUR CONTRACTOR EFFORTS TO FIND REPLACEMENT FORMULATIONS FOR COMPOSITE PROPELLANT GRAIN INHIBITORS, SMOKELESS INSULATORS, AND FLEXIBLE ROCKET MOTOR INSULATOR WERE SUCCESSFUL. TASK 2 FOR ALL EFFORTS HAS BEEN INITIATED.	475.0	420.0	55.0	MAR 84	JUL 83
3 83 1051	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS THE CONTRACTS FOR TASK 2 FOR 3 OF THE 4 CONTRACTOR EFFORTS HAVE BEEN PLACED. THE CONTRACT FOR THE FOURTH EFFORT IS IN PROCESS. TASK 2 WORK CONSISTS OF SCALING UP THE PROCESSES FOR THE CANDIDATE MATERIALS TO FULL SCALE COMPONENTS.	380.0	365.0	2.0	APR 84	APR 84
3 82 1060	ELECTRICAL TEST AND SCREENING OF CHIPS TEST SYSTEM MECHANICAL SPECIFICATION WITH ROTATING ARM WAS PREPARED. PLANNED COMPUTER CONTROL ARCHITECTURE SUPPORTS FOUR FUNCTIONS: PATTERN RECOGNITION, HOST SIMULATOR, DIRECT CHIP PROBE/TESTING CONTROLLER AND WORKSTATION CONTROLLER.	750.0	646.6	79.9	OCT 83	SEP 83
3 83 1060	ELECTRICAL TEST AND SCREENING OF CHIPS NO SIGNIFICANT ACCOMPLISHMENTS DURING THIS REPORTING PERIOD. REFER TO MMT PROJECT 3 82 1060 FOR CURRENT PROGRESS.	625.0			DEC 85	DEC 85
3 83 1072	MULTIPLE HIGH RELIABILITY/LOW VOLUME LSI MANUFACTURING (ICAM) INSOUTH MICROSYSTEMS IS DEVELOPING PROCESSING BLOCKS FOR MANUFACTURING SEVERAL CIRCUIT TYPES UTILIZING SEVERAL TECHNOLOGIES. THIS INCLUDES OBSOLETE CIRCUITS IN ISOLATED JUNCTION BIPOLAR, DIELECTRIC ISOLATED BIPOLAR, METAL GATE CMOS + SI-GATE CMOS.	1,000.0	872.5	59.5	NOV 83	NOV 83
3 82 1073	REAL TIME ULTRASONIC IMAGING THE THIRD PROGRAM REVIEW WAS HELD JUNE 10, 1983. ALTHOUGH TOTAL INTEGRATION OF THE PROTOTYPE HAD NOT BEEN COMPLETED, MUCH OF THE SYSTEM PERFORMED WELL. HIGH QUALITY IMAGERY OF FLAWS IN THE VIPER TUBE WAS DEMONSTRATED.	960.0	839.3	120.6	JAN 84	JAN 84
3 81 1075	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) BATTELLE DEVELOPED A MASTER PLAN DEFINING THE MT PROJECTS NEEDED TO REALIZE A COMPUTER AIDED MANUFACTURING CAPABILITY. AUTOMATION AND CAD/CAM TECHNOLOGIES WERE ADDRESSED. DESCRIPTIONS OF FUTURE MANUFACTURING PROJECTS WERE DEVELOPED + PRIORITIZED.	1,985.0	1,817.9	167.0	SEP 81	DEC 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 82 1076	AUTOMATIC RECOGNITION OF CHIPS KULICK AND SOFFA INDUSTRIES IS PROTOTYPING A SMALL ROBOT AND A MATERIAL HANDLING SYSTEM AND PATTERN RECOGNITION EQUIPMENT TO IDENTIFY AND ORIENT CHIPS. PLACE THEM ON THE PROPER PAD ON A SUBSTRATE, AND BOND THEM. KES IS DEMO. PARTS TO INDUSTRY.	700.0	495.8	150.4	FEB 84	FEB 84
3 82 1086	COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS THIS PHASE 2 EFFORT IS ESSENTIALLY COMPLETE. A FINAL REPORT COVERING THIS PHASE HAS BEEN DRAFTED AND WILL BE DISTRIBUTED IN AUGUST 1983.	655.0	605.1	48.0	MAY 83	AUG 83
3 83 1086	COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS THIS PHASE 3 EFFORT IS JUST GETTING STARTED. MILESTONE CHART IS BEING PREPARED PENDING CONTRACT FINALIZATION.	500.0			DEC 84	DEC 84
3 82 1088	OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES A SECOND MOTOR CASE HAS BEEN HYDROBURSTED. THE BURST PRESSURE WAS 1740 PSIG, WELL ABOVE THE MINIMUM EXPECTED. THE PROGRAM IS ON HOLD STATUS AWAITING A CASE INSULATOR FROM THE ELASTOMERIC INSULATION MNT PROGRAM.	400.0	305.2	76.5	MAY 83	MAY 84
3 83 1089	INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS CONTRACT CURRENTLY BEING NEGOTIATED WITH HERCULES INC., BACCHUS, UTAH.	50.0			DEC 83	DEC 83
3 82 1108	RF AND LASER HARDENING OF MISSILE DOMES BATTELLE SPUTTERED AN INDIUM TIN OXIDE COATING ONTO 60 DOMES TO EVALUATE ITS LASER ENERGY SHIELDING CAPABILITY. ALSO, A FINE COPPER-NICKEL GRID WAS PLATED ONTO THE INSIDE OF DOMES TO GIVE THEM RADIO ENERGY SHIELDING. A DEMO WAS HELD FOR INDUSTRY.	400.0	249.0	50.0	MAY 82	MAY 84
3 82 1109	ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM THE SUBSYS. SPEC. DOCUMENTATION WAS OFFICIALLY RELEASED INTO THE BOEING DOCUMENTATION SYS. THIS DOCUMENT INCLUDES BOTH HARDWARE REQUIREMENTS SPEC + SOFTWARE DESIGN SPEC HARDWARE DESIGN EQUIP. SPEC.	1,005.0	561.5	289.6	SEP 83	SEP 84
3 82 1121	MISSILE MANUFACTURING PRODUCTIVITY IMPROVEMENT PROGRAM A SCOPE OF WORK WAS PREPARED AND MEETINGS HELD WITH NAVY AND AIR FORCE. A CONTRACT WILL BE NEGOTIATED WITH MARTIN MARIETTA TO ANALYZE THEIR SUBCONTRACTORS MANUFACTURING PLANNING TO FIND PRODUCTIVITY AND BUSINESS SYSTEM IMPROVEMENTS.	800.0		20.0	JUN 83	DEC 84
3 82 1126	WOUND ELASTOMER INSULATOR PROCESS CASE BOND AGING TESTS CONTINUED. ADHESION TESTS OF THE 4 WOUND ELASTOMERIC INSULATOR CANDIDATE FORMULAS TO THE MOLDING FORMULA FOR PREMOLOS WERE CONDUCTED. DESIGN VERIFICATION STUDIES CONTINUED.	650.0	559.2	40.0	APR 84	DEC 83

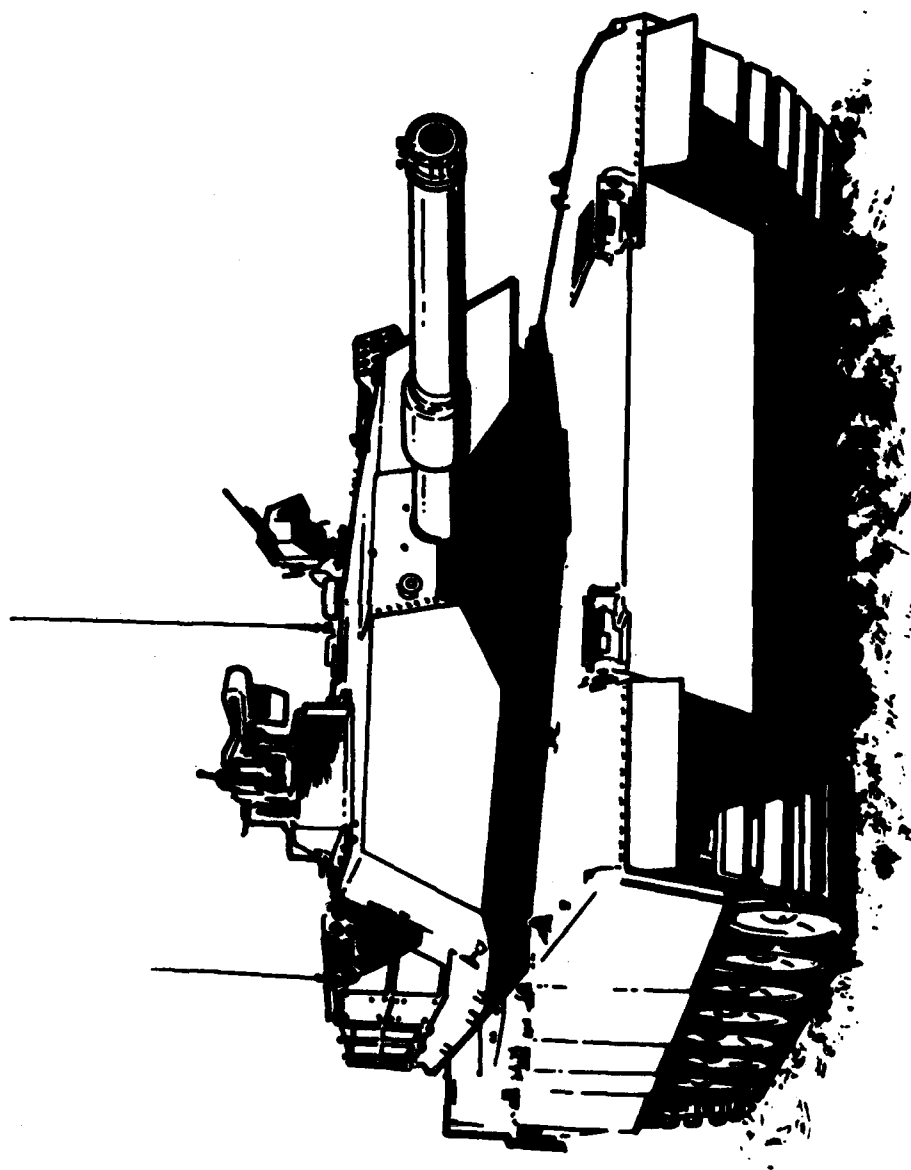
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
SUMMARY PROJECT STATUS REPORT  
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 83 1126	WOUND ELASTOMER INSULATOR PROCESS HERCULES RECEIVED THE AUTHORITY TO PROCEED WITH TASK 11 (FY83 FUNDING) ON 6 MAY 83. HERCULES RECOMMENDED THAT INTEGRAL THRUST REVERSAL ADAPTERS ARE FEASIBLE WITH THE WOUND ELASTOMERIC INSULATOR PROGRAM.	625.0	611.2	1.2	DEC 83	DEC 83
3 80 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****				DEC 81	DEC 83
3 81 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****					
3 82 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****				OCT 84	OCT 84
3 83 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****					
3 81 3139	MILLIMETER SEEKERS FOR TERMINAL MOWING (TM) ALL ELEMENTS OF THIS CONTRACT ARE COMPLETE. AWAITING UNCLASSIFIED VERSION OF TECHNICAL REPORT. A SPECIAL WORKING GROUP EVALUATING CONCEPT DEFINITION PROPOSALS FOR TERMINALLY GUIDED WARHEAD RECEIVED THE IMPLEMENTATION PLAN FOR MRS-TGN.	1,300.0	849.2	450.8	SEP 82	JUN 83
3 81 3263	PRINTED WIRING BOARDS UTILIZING LEADLESS COMPONENTS HUGHES FULLERTON FOUND POLYIMIDE/KEVLAR CIRCUIT BOARDS MOUNTED ON COPPER-INVAR-COPPER THERMAL PLATE BEST AT THERMAL CYCLING. 84-LEAD CERAMIC CHIP CARRIERS WERE VAPOR PHASE SOLDERED TO THE BOARDS. CORNER JOINTS WERE REINFORCED WITH RIGID EPOXY RESIN.	400.0	320.8	69.4	OCT 83	NOV 83
3 81 3294	PRODUCTION PROCESSES FOR ROTARY ROLL FORMING TECHNICAL EFFORT IS COMPLETE. FINAL REPORT DRAFT IS APPROVED AND IS AT CONTRACTORS HOUSE FOR REPRODUCTION AND DISTRIBUTION.	175.0	132.4	42.6	JUN 82	NOV 83
R 80 3376	TESTING OF ELECTRO-OPTICAL COMPONENTS AND SUBSYSTEMS ALL TECHNICAL WORK HAS BEEN ACCOMPLISHED. FINAL TECHNICAL REPORT DRAFT HAS BEEN RECEIVED. MODIFIED AND APPROVED. PRESENTLY AWAITING RECEIPT OF FINAL REPORT MASTER AND COPIES.	300.0	298.8	1.2	JUN 81	AUG 83
3 82 3411	NON-PLANAR PRINTED CIRCUIT BOARDS ASSEMBLY OF 5 ANTENNAS IS IN PROGRESS BY MULTIMETRICS INC. THE TRIMMING FIXTURE REQUIRED FOR THE BALUN ASSEMBLY HAS BEEN UTILIZED TO FABRICATE A SERIES OF TEST SPIRALS. THESE WILL BE TESTED FOR GAIN UNIFORMITY, PATTERN SHAPE AND AXIAL RATIO.	550.0	533.2	16.8	OCT 83	OCT 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 82 3423	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES CONCEPT REFINEMENT AND REPRODUCIBILITY TESTING HAVE BEEN COMPLETED.	479.5	375.3	86.0	JUL 83	JUL 83
8 79 3441	APPLICATION OF HIGH ENERGY LASER MANUFACTURING PROCESSES ALL WORK HAS BEEN COMPLETED. AWAITING FINAL TECH REPORT.	400.0	200.0	200.0	SEP 79	OCT 83
3 81 3445	PRECISION MACHINING OF OPTICAL COMPONENTS A MAJOR COMPONENT OF THE CONTOURING MACHINE TOOL CONTROLLER WAS REDESIGNED AND FABRICATED. THE MACHINE WAS SUCCESSFULLY REPAIRED. ADDITIONAL FUNDS WERE REQUESTED TO PROVIDE DOCUMENTATION AND PROMOTE TECHNOLOGY TRANSFER.	637.0	510.3	114.7	JUN 82	MAR 84
3 81 3449	ALTERNATE PROCESS FOR IRDI PROGRAM PLAN REVIEWED. LITERATURE REVIEW COMPLETED. PRELIMINARY PRODUCTION PLANT DESIGN AND COST ESTIMATES STARTED. ALL REQUIRED MONTHLY REPORTS PREPARED AND RECEIVED TO DATE. TASK 2A TO BE SIGNED IN AUGUST, 1983.	250.0	134.7	113.3	SEP 84	SEP 84
3 83 3449	ALTERNATE PROCESS FOR IRDI 125K CONTRACT WILL BE SIGNED IN AUGUST, 1983.	150.0		5.0	SEP 85	SEP 85





**TANK-AUTOMOTIVE COMMAND  
(TACOM)**

# TANK - AUTOMOTIVE COMMAND

## CURRENT FUNDING STATUS, 1ST CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS (\$)	CONTRACT FUNDS ALLOCATED (\$)	CONTRACT FUNDS EXPENDED (\$)	INHOUSE REMAINING (\$)	INHOUSE FUNDS EXPENDED (\$)
77	1	750,000	742,200	742,200 (100%)	7,800	0 (0%)
78	1	0	0	0 (0%)	0	0 (0%)
79	3	2,348,000	1,989,000	1,237,000 (62%)	359,000	359,000 (100%)
80	4	1,038,000	952,900	778,500 (81%)	85,100	74,000 (86%)
81	14	10,217,000	8,690,700	4,901,800 (56%)	1,526,300	965,100 (63%)
82	21	10,906,000	5,732,900	3,522,900 (61%)	5,173,100	900,500 (17%)
83	15	4,318,000	1,093,000	13,000 (1%)	3,225,000	38,000 (1%)
TOTAL	59	29,577,000	19,200,700	11,195,400 (58%)	10,376,300	2,336,600 (22%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 65% INHOUSE REMAINING 35%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
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PLUJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 77 3749	HYDRAULIC ROTARY ACTUATORS DYNAMIC BENCH TEST FACILITY NEARLY COMPLETED. MODIFIED ACTUATORS WILL SOON BE TESTED. TOP IS NEARLY COMPLETE, PENDING ECP TO MAKE MINOR MODIFICATIONS.	750.0	742.2		MAY 79	SEP 83
E 80 3749	HYDRAULIC ROTARY ACTUATORS SEE E 77 3749.	145.0	133.9		DEC 81	SEP 83
E 81 3749	HYDRAULIC ROTARY ACTUATORS FOR M9 SEE E 77 3749.	157.0	150.0		JUL 81	SEP 83
T 78 4264	TRACK INSERTS AND FILLERS FOR TRACK RUBBER PADS ***** DELINQUENT STATUS REPORT *****				JAN 81	DEC 83
T 79 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES PRODUCTION MOCK-UP USING M 1 TURRET RING CASTING TO INNER TURRET WALL COMPLETED. FINAL REPORT FILM AND CONTRACT CLOSE-OUT TARGETED FOR SEPTEMBER 83.	477.0	307.0	170.0	JUL 81	SEP 83
T 82 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES PROCUREMENT REQUEST PREPARED WILL AWARD CONTRACT PENDING FINAL NEGOTIATION.	275.0	225.0		OCT 84	FEB 85
T 82 5005	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE I) THE DATA SECTION OF THE COMPUTER PROGRAM THAT WILL HANDLE GEAR GEOMETRIES. THE DRAWING ROUTINES WERE MODIFIED TO ACCOMMODATE HELICAL GEAR GEOMETRY. THE APPENDICES DEALING WITH VARIOUS ANALYSIS HAVE BEEN COMPLETED.	386.0	256.0	13.0	JAN 84	MAR 84
4 83 5005	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE II) TWO GEARS (ONE SPUR + ONE HELICAL) HAVE BEEN CHOSEN FOR USE IN THE FORGING TRIALS. THE GEAR DWGS. ARE BEING EVALUATED + WILL BE SENT TO TACOM FOR APPROVAL.	326.0	346.0	13.5	OCT 85	OCT 85
T 82 5014	FOUNDRY CASTING PROCESSES USING FLUID FLOW + THERM ANALYSIS CONTRACT WITH THE UNIV. OF PITTS. WAS AMENDED TO EXPAND THE GEOMETRIC CAPABILITIES OF THE CURRENT PROCEDURES. PRESENTATION OF PROGRAM RESULTS WAS MADE TO FOUNDRY AND TOOL DESIGN REPRESENTATIVES FOR THE FOUNDRIES OF DEERE AND CO AND RUCK ISLAND ARS.	100.0	80.0	15.0	MAR 84	DEC 83
T 82 5019	STORAGE BATTERY LOW MAINTENANCE PROTOTYPE BATTERIES FROM CONTRACTOR HAVE BEEN DELIVERED TO YPG AND CRTC FOR FIELD VEHICLE TESTS. TESTS BEGAN JAN 83. SATISFACTORY PERFORMANCE AT BOTH TEST SITES REPORTED. LAB PERFORMANCE TESTS ALSO BEGAN JAN 83. LATTER TESTS VERY GOOD/75PCT COMPLETE.	90.0		52.0	JAN 84	DEC 83

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SUMMARY PROJECT STATUS REPORT  
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 62 5024	GEAR DIE DESIGN + MFG UTILIZING COMPUTER TECHNOLOGY (CAM) THE SKIPT FOR THE MOVIE ON CAD/CAM OF SPIRAL BEVEL GEARS HAS BEEN PREPARED. SHOOTING IS NEARING COMPLETION. THE REPORT IS AVAILABLE TO ALL INTERESTED PARTIES.	200.0	150.0	15.0	DLT 83	SEP 83
T 80 5045	SPALL SUPPRESSIVE ARMOR FOR COMBAT VEHICLES (PHASE II) AN M113 W/ SPALL KIT + COMBAT LOADED W/ ITEMS OF PERSONAL GEAR, RATIONS, MBL GEAR AND AMMO WAS FIRED UPON BY 2 TYPES OF HEAT AMMU. RESULTS SHOWED THAT THE KIT PERFORMED ITS FUNCTION BY REDUCING FRAGMENT SPRAY + CONTAINING THE STOMED ITEMS.	86.0	56.0	30.0	MLV 81	AUG 83
T 62 5053	FABRICATION TECHNIQUES FOR HI STRENGTH STRUCTURAL CERAMICS WORK TO OPTIMIZE MATERIAL TECHNOLOGY FOR MONOLITHIC CERAMIC AND CERAMIC COATED COMPONENTS. INITIAL MATERIALS PASSED RUPTURE AND TOUGHNESS TESTS. AMMRC INITIATED WORK ON CERAMIC COMPOSITES.	500.0	340.0	125.0	JUN 83	FEB 84
4 63 5053	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE II) FUNDS HAVE BEEN RECEIVED.	465.0			FEB 85	FEB 85
T 61 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS PILOT HEAT TREATING OF SAMPLES AND LABORATORY TESTING IS COMPLETE. FIELD TESTING HAS BEEN INITIATED. DRAFT FINAL REPORT IS BEING REVIEWED BY THE GOVERNMENT.	175.0	120.0	54.1	SEP 83	SEP 83
T 62 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS NON-SURFACE HARDENED T-142 AND T-156 END CONNECTORS AND CENTER GUIDES HAVE BEEN PURCHASED. COMPONENTS ARE BEING HEAT TREATED. LAB EVALUATION OF LASER HEAT TREATED COMPONENTS IS IN PROGRESS.	170.0	123.0	20.0	JAN 84	JAN 84
T 62 5064	LIGHT WEIGHT SADDLE TANK (PHASE III) ALL REQUESTED GOVT-OWNED MATERIAL FORWARDED TO CONTRACTOR. DESIGN OF TANK TOOLING AND FITTINGS FINISHED. WOOD MOCKUP OF FINAL FUEL TANK CONFIGURATION CHECKED FOR FITTING LOCATIONS AND INSTALLATIONS. AFTER PASSING TEST FUEL TANKS SENT TO 4 TEST SITES.	85.0	20.0	65.0	SEP 83	DEC 83
T 62 5067	PLASTIC BATTERY BOX FINAL REPORT DISTRIBUTED AND VALIDATED ECONOMIC ANALYSIS PUBLISHED. TEST PLAN FOR IN-HOUSE MULTI-TEMPERATURE STRESS TEST ON M809 BOX IS IN PROGRESS. FOUR M39 BATTERY BOXES ORDERED FOR YPG AND INSTALLED IN THE 2.5 TON TRUCK BY CONTRACTOR, AM GENERAL.	75.0		70.0	DEC 82	DEC 83
T 61 5068	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE II) TEST VEHICLES HAVE COMPLETED 20,000 MILES OF ROAD TESTS WITHOUT INCIDENT. A FINAL REPORT ON THIS PHASE IS BEING PREPARED. PROCUREMENT ACTION WAS INITIATED FOR PHASE III, LONG TERM MARINE ENVIRONMENT EXPOSURE TESTING.	450.0	404.0	45.0	SEP 82	AUG 83

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PROJ NO.	TITLE + STATUS	AUTHORIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
		(\$000)	(\$000)	(\$000)		
4 63 5068	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE III) --- JUST FUNDED. NO 301 REQUIRED. ---					
T 81 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) ***** DELINQUENT STATUS REPORT *****				SEP 82	SEP 83
T 82 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) ***** DELINQUENT STATUS REPORT *****				SEP 83	APR 85
4 83 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES --- JUST FUNDED. NO 301 REQUIRED. ---					
T 81 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THIS PHASE IS TECHNICALLY COMPLETE. A FMS MANUAL WITH SUPPORTING SOFTWARE HAS BEEN DEVELOPED.	779.0	712.9	46.6	MAR 82	DEC 83
T 82 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THIS PHASE IS TECHNICALLY COMPLETE. CONTRACT CONSULTING SUPPORT WAS PROVIDED TO FOUR INSTALLATIONS TO DETERMINE THE FEASIBILITY AND CONFIGURATION OF FMS.	750.0	661.9	67.9	MAR 83	DEC 83
4 83 5082	FLEX MACHINING SYS (FMS) PILOT LINE F/TLV COMPS (CAM) (PH V) THIS PHASE, THE LAST PHASE OF A FIVE PHASE PROGRAM, WILL PROVIDE SUPPORT TO DOD CONTRACTORS WHO ARE PLANNING TO INSTALL AND/OR OPTIMIZE FMS.	350.0	350.0		DEC 84	JCT 84
T 79 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 3 SEVEN NO. 6 AGT 1500 ENGINE ACCESSORY GEARS HAVE BEEN FORGED. COMPLETE DIE FILL HAS BEEN OBTAINED AND QUALITY APPEARS EXCELLENT. TRW WILL FORGE A GEAR FOR THE M2/M3 INSTEAD OF ANOTHER ACT 1500 ENGINE ACCESSORY GEAR.	328.0	204.0	124.0	MAR 81	SEP 83
T 62 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 4 THE FY82 FUNDS ARE FOR PROJECT MONITORING BY TACOM OF THE ON-GOING CONTRACTED EFFORT AT TRW UNDER T795083.	30.0		23.0	SEP 83	SEP 83
T 81 5085	PRODUCTION TECHNIQUES FOR FABRICATING TURBINE RECUPERATOR ALL WORK COMPLETED ON THIS PROJECT, WAITING FOR TECHNICAL REPORT.	250.0	215.0	28.0	SEP 82	MAR 83
T 82 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE IV) DATA COLLECTION NEARLY COMPLETE. RESULTS SUBMITTED ON THE H2B301 EXPERIMENTAL ARMOR.	250.0	213.0	7.5	JAN 84	JUN 83
4 83 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE V) CONTRACTOR HAS BEGUN VISITS TO VEHICLE/COMPONENT CONTRACTORS AND IS SELECTING POSSIBLE CANDIDATE COMPONENTS FOR NON-TRADITIONAL MACHINING PROCESSES.	123.0	69.0		SEP 84	SEP 84

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PRJ NO. TITLE + STATUS

PRJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 81 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) ALUMINUM ARMOR PLATES AND WELDING ELECTRODES ORDERED AND RECEIVED. HOLDING FIXTURES AND WELD JOINTS DESIGNED.	70.0		5.0	MAR 84	MAR 84
4 83 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) --- JUST FUNDED. NO 301 REQUIRED. ---					
T 81 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES LAB TESTING HAS BEEN CONDUCTED TO VERIFY THE ADEQUACY OF THE DESIGN FOR THE REAR LEAF SPRING SET. A HIGH STRESS RATE WAS USED TO MINIMIZE THE TEST DURATION. TEN SETS OF SPRINGS HAVE BEEN MADE.	158.0	143.0	15.0	JAN 83	DEC 83
T 82 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES FRONT SPRING ASSY WAS REDESIGNED FOR COMPOSITE MATERIALS + MFG PROCESSES. DIES WERE DESIGNED + FABRICATED. ALL REQD MATERIAL WAS PROCURED. FABRICATION WAS DEFERRED UNTIL TESTING WAS COMPLETED FOR THE REAR LEAFSPRING (T 81 6011).	137.0	73.0	19.0	JUN 83	DEC 83
T 81 6028	PRODUCTION QUALITY CONTROL BY AUTOMATED INSPECT EQUIPMENT A NEW TDP FOR ON-LINE EVAL. OF THE AIDS WAS PREPARED + THE CONTRACT WAS AWARDED. CONTROL SOFTWARE FOR THE 6V53 ENGINE WAS GENERATED BY THE CONTRACTOR. HARDWARE EVAL. HAS BEGUN. THE ABS. COMPRESSION TEST WILL BE EVALUATED IN THE LATTER PART OF 83.	60.0	47.8	10.0	JUL 82	APR 84
T 79 6038	HIGH DEPOSITION WELDING FLUX CORE WELDING, H-PLATES WELDED. SUBMERGED ARE WELDING PARAMETERS ESTABLISHED. NARROW GAP WELDING EQUIPMENT BEING ADJUSTED. PLASMA MIG EQUIPMENT BEING SELECTED.	1,543.0	1,478.0	65.0	JUL 80	JUL 84
T 82 6038	HIGH DEPOSITION WELDING ALL PHASES OF MONITORING GENERAL DYNAMICS PROGRAM OF HIGH DEPOSITION WELDING ARE IN PROCESS.	1,543.0	1,478.0	15.0	DEC 84	DEC 84
T 82 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION THE STATE-OF-THE-ART METROLOGY SYSTEM SURVEY WAS COMPLETED. THE NEEDS ANALYSIS AND SOA REPORT ARE IN PROCESS. FUNCTION MODELS OF CURRENT FACTORY PRACTICE AS REVEALED BY INDUSTRY SURVEYS HAVE BEEN REVIEWED AND APPROVED.	848.0	828.0	32.0	FEB 85	DEC 85
4 83 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION (PHASE II) SEE PROJECT NO T 82 6054 FOR STATUS.	100.0			DEC 85	DEC 85
T 80 6057	XMI COMBAT VEHICLE SEE SUBTASK.	69.0	39.0	30.0	OCT 82	FEB 84

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PLCJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 80 6057 06	METROLOGY METHODS TASK OFFICIALLY TERMINATED 19 NOV 81 TO PREVENT CHRYSLER DEFENSE FROM USING UP THE FUNDS. THE PROJECT WILL BE OFFICIALLY CLOSED AFTER THE FINAL REPORT IS OBTAINED.					FEB 84
T 82 6057	XMI COMBAT VEHICLE SEE SUBTASKS.	2,502.0	171.0	188.0	SEP 83	FEB 84
T 82 6057 03	AUTOMATED METALLIZING CONTRACT PENDING AWARD TO GENERAL DYNAMICS.				JUN 83	FEB 84
T 82 6057 04	THERMAL CUTTING OF TRACKED COMBAT VEHICLE PARTS WORK COMPLETED AND FINAL REPORT SUBMITTED ON PHASE 1.					JUN 83
T 82 6057 05	MACHINE DIAGNOSTICS CONTRACT PENDING AWARD TO GENERAL DYNAMICS.				SEP 83	FEB 84
T 82 6057 13	LASER CUTTING CONTRACT PENDING AWARD TO GENERAL DYNAMICS.	2,502.0	171.0	188.0	MAY 83	FEB 84
4 83 6057	ABRAMS M1 COMBAT VEHICLE SEE SUBTASKS.	135.0		7.5	FEB 84	FEB 84
4 83 6057 03	AUTOMATED METALLIZING FY83 FUNDS USED FOR IN-HOUSE ADMINISTRATIVE EFFORTS.				FEB 84	FEB 84
4 83 6057 05	MACHINE DIAGNOSTICS FY83 FUNDS USED ONLY FOR ADMINISTRATIVE EFFORTS.				FEB 84	FEB 84
4 83 6057 13	LASER CUTTING OF TRACKED COMBAT VEHICLE PARTS FY83 FUNDS USED ONLY FOR ADMINISTRATIVE EFFORTS.				FEB 84	FEB 84
T 86 6059	LARGE CAST ALUMINUM COMPONENTS SEE SUBTASK.	738.0	724.0	14.0	JUL 81	JUN 84
T 80 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS PMC SUBMITTED FINAL REPORT FOR PHASE I VOL I FOR REVIEW. PHASE II INTERIM REPORT IS BEING PREPARED.					JUN 84
T 81 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASK.	291.0	285.0	5.0	NOV 84	DEC 83
T 81 6059 04	RESIN MOLDED COMPOSITE MATERIALS THE PRELIMINARY TEST PLAN WAS APPROVED. LABORATORY TESTING OF PROTOTYPES HAS BEEN INITIATED.					DEC 83

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T 82 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASKS.	1,428.0			DEC 84	MAR 85
T 82 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS EVALUATION OF THE CAST TURRETS COST AND PROCESS PARAMETERS BEING EVALUATED.	490.0	445.0	38.0	DEC 83	JUN 84
T 82 6059 02	SELF-THREADING FASTENERS PROGRAM SCHEDULES COMPLETED. AREAS OF EVALUATION HAVE BEEN SELECTED. FASTENERS HAVE BEEN SELECTED FOR TESTING AND LABORATORY ANALYSIS.	246.0	196.0	24.0	FEB 83	JUN 84
T 82 6059 03	ADHESIVE BONDING PROGRAM BUDGETS AND SCHEDULES COMPLETED. PRODUCTION AREAS TO BE EVALUATED HAVE BEEN IDENTIFIED. ADHESIVES HAVE BEEN PROCURED AND LABORATORY TESTING HAS BEEN INITIATED.	300.0	250.0	24.0		SEP 84
T 82 6059 06	LASER HEAT TREATING FIXTURES AND OPTICAL TOOLS HAVE BEEN FABRICATED. LASER HEAT TREATING AND METALLURGICAL TESTING HAS BEEN INITIATED.	387.0	337.0	26.0	SEP 84	DEC 84
T 82 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET PROTOTYPE FABRICATION WAS INITIATED.	488.0	438.0	25.0	JUN 83	SEP 83
T 82 6059 20	CARC APPLICATION PROCESSING TECH PAINT TEST PLAN HAS BEEN COMPLETED AND APPROVED. ROBOTIC PAINTING EQUIPMENT HAS BEEN PROCURED, INSTALLED AND DEBUGGED. PAINT TESTING IS CONTINUING.	418.0	368.0	26.0	DEC 84	MAR 85
4 83 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASKS.	635.0			APR 85	APR 85
4 83 6059 13	METAL ARC SPRAYING CONTRACT TO BE AWARDED IN FY83.	310.0			UCT 84	UCT 84
4 83 6059 17	PRE-PAINT CLEANING SYSTEM CONTRACT TO BE AWARDED IN FY83.	325.0			UCT 84	JCT 84
4 83 6059 19	SQUEEZE CAST ROAD WHEELS CONTRACT PROPOSALS HAVE BEEN RECEIVED, THEY WILL BE REVIEWED IN ORDER TO LET CONTRACT.	96.0	80.0	2.0	APR 85	APR 85
T 82 6067	FRAME WELDING FIXTURES PROLUMEPENT PACKAGE PREPARED FOR CONTRACTOR EFFORT. CONTRACT HAS BEEN AWARDED FOR THE SYSTEM DESIGN.	77.0	48.0	1.0	FEB 84	MAR 84

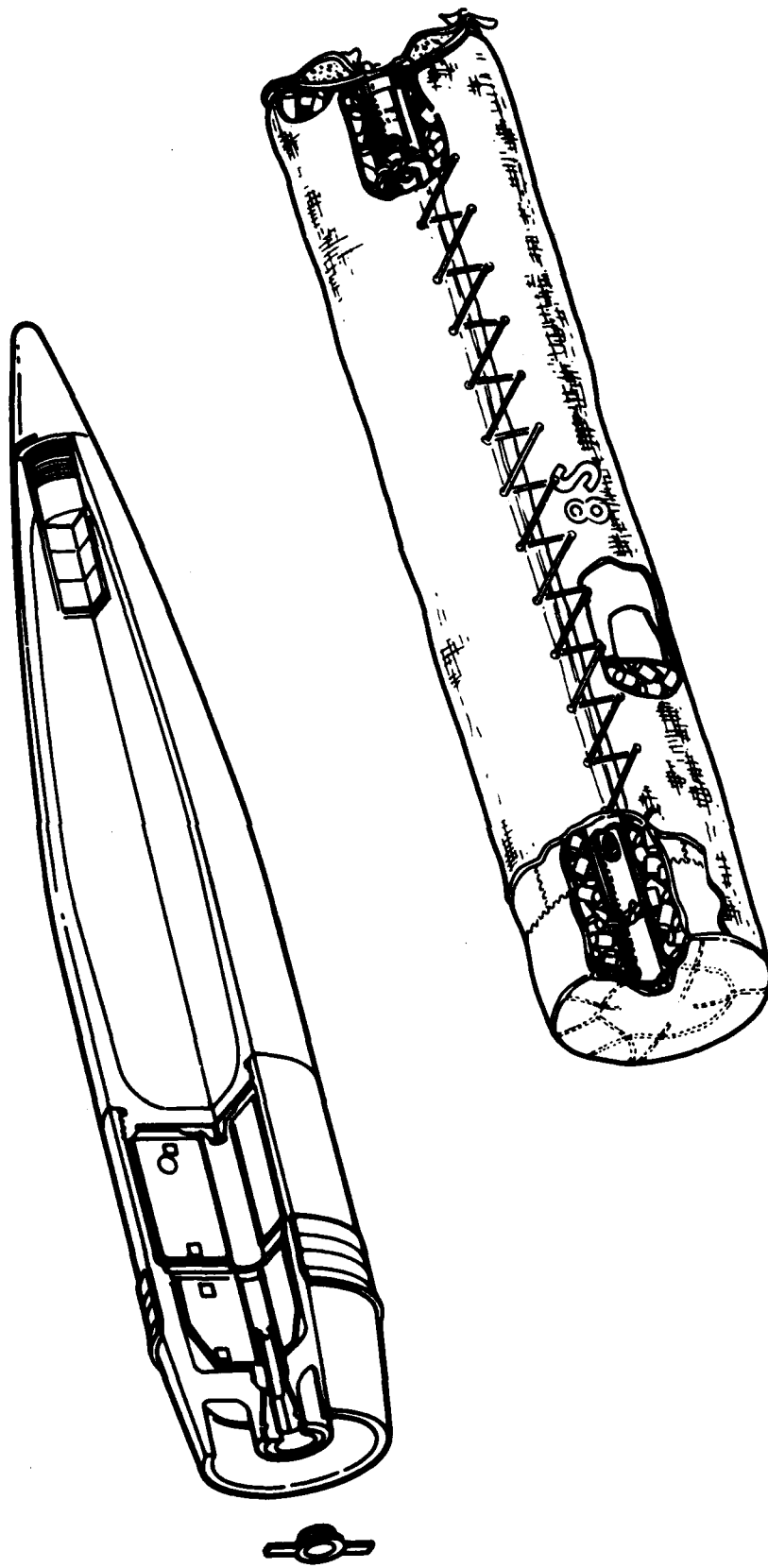


MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
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PROJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUE (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 81 6076	AUTOMATED DEPOT INSPECTION OF ROADWHEELS THE SYSTEM WAS DELIVERED TO RRAD FOR ACCEPTANCE TESTING IN MID-APRIL. ALL ROAD WHEELS SCHEDULED FOR DESTRUCTIVE TESTING THRU MAY 83 WILL FIRST BE ULTRASONICALLY TESTED. THE NDT DATA IS BEING COMPARED TO ESTABLISH THE CORRELATION FACTORS.	277.0	225.0	22.0	SEP 83	APR 84
T 62 6079	AGI-1500 ENGINE SEE SUBTASKS.	1,360.0	1,066.0	144.0	MAR 85	MAY 84
T 82 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES TOOLING FOR FIRST STAGE TURBINE BLADES SHIPPED TO TRW. CASTING PROCESS DEFINITION HAS BEEN COMPLETED. SOLID BLADES ARE CURRENTLY BEING EVALUATED BY AVCO LYCOMING.	400.0	300.0	50.0	SEP 83	MAY 84
T 82 6079 02	RAPIDLY SOLIDIFIED TECHNOLOGY -RST- NICKLE-BASE SUPERALLOY CAP PROCESS DEFINITION AND CAP VARIABILITY STUDY HAVE BEEN COMPLETED. DIFFERENT REDUCTIONS IN CROSS-ROLLING AND HEAT TREATMENT PROCESSES HAVE BEEN EVALUATED TO ESTABLISH THE BEST COMBINATION OF MECHANICAL PROPERTIES AND MICROSTRUCTURES.	450.0	350.0	50.0	SEP 83	APR 84
T 82 6079 03	BI-CAST HIGH PRESSURE TURBINE NOZZLE CAP PROCESS DEFINITION AND CAP VARIABILITY COMPLETED. REDUCTIONS IN CROSS-ROLLING AND HEAT TREAT HAVE BEEN EVALUATED TO ESTABLISH THE BEST COMBINATION OF MECHANICAL PROPERTIES AND MICROSTRUCTURES.	510.0	416.0	44.0	OCT 83	MAY 84
4 83 6079	AGT-1500 ENGINE PROCUREMENT REQUEST PREPARED, AND CONTRACT CURRENTLY UNDER NEGOTIATION. INDIVIDUAL SUBTASK STATUS REPORTS WERE NOT PROVIDED.	1,449.0				
T 81 6089	ABRAMS TANK PLANT - TECH MOD PROGRAM A PRELIMINARY SCOPE OF WORK HAS BEEN DEVELOPED FOR PHASE I ON THE IPI. THIS IPI WILL ENCOMPASS FOUR PLANTS, DETROIT ATP, LIMA ATP, SCRANTON AND STERLING HEIGHTS.	100.0		90.4	SEP 83	SEP 83
T 82 6090	TOWELE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM THE MAJORITY OF THE PREPARATORY WORK FOR THE IPI PROGRAM HAS BEEN COMPLETED. THE PROJECT IS NOW AWAITING FURTHER FUNDING ENABLING PHASE I TO BEGIN.	100.0		8.1	MAY 83	JUN 84
4 83 6095	ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS (PHASE I) --- JUST FUNDED. NL 301 REQUIRED. ---					
T 81 6096	PRODUCTION OF SPECIAL ARMOR STEEL STEEL PRODUCED MEETS THE ESTABLISHED REQUIREMENTS OF TEXTURE AND HARDNESS. PREPARATIONS HAVE BEEN MADE TO ROLL HALF INCH THICK AND LESS.	900.0	328.0	225.0	NOV 83	MAY 84

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PHLJ NO.	TITLE + STATUS	AUTHORIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 81 6099	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS AMHC, ARRAUCUM, AND PMB HAVE INITIATED ACTIVITY IN THE AREAS OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE.	6,550.0	6,040.0	419.0	JUL 84	JUL 84
4 83 6107	IMPROVED MBT TRACK THREE OF THE FOUR CONTRACTS PLANNED HAVE BEEN AWARDED. THE FOURTH CONTRACT WILL BE AWARDED IN AUGUST.	735.0	328.0	17.0	AUG 84	AUG 84
4 83 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE --- JUST FUNDED. NO 301 REQUIRED. ---					
4 83 7001	ADVANCED CERAMIC ARMOR COMPONENTS FOR COMBAT VEHICLES --- JUST FUNDED. NO 301 REQUIRED. ---					



**ARMAMENT, MUNITIONS AND CHEMICAL COMMAND  
(AMCCCOM)  
(AMMUNITION)**

A M C C D M (AMMUNITION)

CURRENT FUNDING STATUS, 1ST CV83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ( \$ )	* * C O N T R A C T A L L O C A T E D ( \$ )	* * F U N D I N G E X P E N D E D ( \$ )	* * I N H O U S E R E M A I N I N G ( \$ )	* * F U N D I N G E X P E N D E D ( \$ )
77	1	1,452,900	1,184,100	1,156,000 ( 97% )	268,800	268,800 (100%)
78	3	916,000	423,700	423,600 ( 99% )	492,300	472,800 ( 96% )
79	11	7,842,500	4,062,200	3,373,100 ( 83% )	3,780,300	2,597,400 ( 68% )
80	18	13,006,900	7,815,300	7,063,100 ( 90% )	5,191,600	3,655,600 ( 70% )
81	26	16,133,300	8,994,000	6,289,300 ( 69% )	7,139,300	3,920,800 ( 54% )
82	44	28,762,000	17,366,900	10,232,200 ( 58% )	11,395,100	5,127,000 ( 44% )
83	25	10,286,300	2,910,700	29,000 ( 0% )	7,375,600	315,400 ( 4% )
TOTAL	128	78,399,900	42,756,900	28,566,300 ( 66% )	35,643,000	16,357,800 ( 45% )

INHOUSE REMAINING 45%

CONTRACT ALLOCATED 55%

ALIMUNIZED FUNDING

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
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PLUJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
0 03 0900	AUTOMATED MULTIPLE FILTER LIFE TESTER A TECHNICAL PROPOSAL WAS REVIEWED AND ACCEPTED. THE CONTRACT AWARD IS IN FINAL NEGOTIATION.	344.0		5.0	SEP 84	SEP 84
0 02 0904	CHEMICAL REMOTE SENSING SYSTEMS THE INTERFEROMETER DESIGN HAS BEEN COMPLETED. INITIAL DEVELOPMENT TESTING INDICATED THAT THE INSTRUMENT WAS COMPATIBLE WITH THE M21 MILITARY REQUIREMENT. THE FY83 MMT PROGRAM HAS BEEN DEFERRED TO FY84 BECAUSE OF R+D PROGRAM SLIPPAGE.	300.0	180.0	95.0	DEC 82	JAN 84
0 02 0905	MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLEKITE CONTRACT WAS AWARDED TO WESTVACO CORP FOR DESIGN OF PILOT PLANT. CONTRACTOR COMPLETED REVIEW OF GOVERNMENT DATA AND HAS BEGUN SET UP OF EQUIPMENT TO PREPARE SAMPLES.	256.0	103.0	80.0	DEC 84	NOV 85
0 02 0909	AUTOMATED AGENT PERMEATION TESTER PROTOTYPE HAS BEEN ASSEMBLED AND COMPONENT DEBUGGING IS BEING CONDUCTED. SAFETY ASSESSMENT AND OPERATING INSTRUCTIONS ARE BEING REVIEWED. PRELIMINARY DEMONSTRATION WAS CONDUCTED IN AUGUST.	224.0	150.0	44.0	JUN 83	SEP 83
0 02 0913	SPIN COATING OF DELON AGENT CONTAINERS MATERIALS WHICH WERE COMPATIBLE WITH 052 WERE EVALUATED.	255.0	201.2	47.3	FEB 83	AUG 83
0 03 0915	SPIN COATING OF DECON AGENT CONTAINERS NO PROGRESS INDICATED.	90.0		5.0	APR 84	APR 84
0 03 0924	MANUFACTURING PROCESS FOR GAS MASK CANISTERS --- JUST FUNDED. NL 301 REQUIRED. ---					
0 03 0925	PROTECTIVE MASK LEAKAGE TESTING TECHNICAL PROPOSALS WERE EVALUATED. AWARD OF CONTRACT IS EXPECTED BY 30 SEP 83.	199.0		5.0	JUN 84	JUN 84
0 01 1001	PILOT LINE FOR FULL FLUIDIC POWER SUPPLIES THE TEST EQUIPMENT DESIGNED AND CONSTRUCTED UNDER PHASE II WAS COMPLETED. FLUIDIC GENERATOR PERFORMANCE CHANGES DICTATED HARDWARE CHANGES IN THE MACHINE. UPON COMPLETION OF ENGINEERING CHANGES THE PROGRAM WILL BE DOCUMENTED AND FINALIZED.	591.0	422.0	55.0	APR 84	APR 84
0 02 1019	MMT PENTABOLKANE PROCESS ENGINEERING ===== DELINQUENT STATUS REPORT =====					
0 03 1090	MODEKNIZATION OF CHARCOAL FILTER TEST EQUIPMENT A SILE SOURCE ANAL HAS BEEN APPROVED TO MSAR FOR PREPARATION OF LEVEL 2 DRAWINGS.	218.0		2.0	JUL 84	JUL 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM  
S U M M A R Y P R O J E C T S T A T U S R E P O R T  
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PROJ NO.	TITLE -> STATUS	AUTHO- RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
		(\$000)	(\$000)	(\$000)		
5 79 1316	CHEMICAL PRODUCTION FILL, CLOSE AND LAP FOR 8 IN XM736 PROJ THIS PROJECT IS COMPLETED.	398.0		398.0	MAR 81	MAR 83
5 80 1316	PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB THE TOLEDO WEIGHT SYSTEM WAS INSTALLED AT THE PILOT PLANT AND THE ACCURACY WAS EVALUATED.	484.0	31.0	453.0	JUN 81	SEP 83
5 81 1318	PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB TWO ENCLOSURES WERE FABRICATED TO PROTECT THE QL FROM THE EFFECTS OF MOISTURE DURING TRANSFER AND FILLING OPERATIONS. TECH REPORT IS BEING PREPARED.	216.0		203.0	JUL 82	SEP 83
5 80 1348	SUPER TROPICAL BLEACH THIS PROJECT HAS BEEN COMPLETED.	202.0	170.7	31.3	MAR 81	MAR 83
5 81 1348	SUPER TROPICAL BLEACH WORK WAS COMPLETED ON PRE-PILOT EVALUATIONS AND OPTIMIZATION OF THE LIQUID REACTOR DOUBLE SALT PROCESS. ENGINEERING DESIGN FOR THE PROCESS HAS BEEN COMPLETED.	822.0	629.1	134.4	APR 84	UCT 83
5 83 1343	SUPER TROPICAL BLEACH WORK INITIATED ON ENVIRONMENTAL CONSTRAINTS.	340.0		6.0	APR 84	APR 84
5 78 1353	SNOKE MIX PROCESS (GLATT) PREPARED ENGINEERING CHANGE PROPOSAL AND DRAFT NOTICE OF REVISION FOR CONFIGURATION CONTROL BOARD. PREPARED FINAL TECHNICAL REPORT WITH INCORPORATION OF TECOM TEST RESULTS.	416.0	18.0	380.0	OCT 80	NOV 83
5 79 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY PHYSICAL WORK COMPLETED EARLIER. TECHNICAL REPORT INITIATED AND SHOULD BE COMPLETED BY DEC 80.	122.0		122.0	SEP 80	DEC 83
5 80 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY DESIGN OF THE PILOT PROCESS WAS COMPLETED. MAJOR ITEMS INCLUDE IN-LINE LAMELLA-TYPE SOLIDS SETTLER, PROGRESSING CAVITY SLUDGE PUMPS, MULTI-ROLL SLUDGE DEMATERING PRESS, SELF-DUMPING SLUDGE HOPPERS AND GRANULAR ACTIVATED CARBON COLUMNS.	156.0	4.0	116.1	DEC 80	SEP 84
5 81 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS EMPHASIS PLACED ON SLUDGE DEMATERING AND DISPOSAL PILOT PROCESS. MILESTONE CHART REVISED TO REFLECT EXPECTED DELAYS CAUSED BY PROCUREMENT PROCESS. REQUEST FOR EXTENSION FOR FUNDING APPROVED.	110.0	1.8	7.9	SEP 83	SEP 84
5 79 1355	MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT ***** DELINQUENT STATUS REPORT *****				JAN 81	DEC 83

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5 80 1355	MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT TOXIC POLLUTANTS AND HAZARDOUS WASTE AT PBA HAVE BEEN IDENTIFIED. THE BAT FOR TREATMENT OF TOXIC/HAZARDOUS MATERIAL HAVE BEEN EVALUATED. DESIGN CRITERIA HAS BEEN INPUT TO THE FY86 MCA PROGRAM. A FINAL TECHNICAL REPORT HAS BEEN PUBLISHED.	222.0		204.1	DEC 81	DEC 83
5 81 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT DU PORT CONTRACT WAS FORMALLY CLOSED OUT AT THE COMPLETION OF PHASE I. INECC LOADED BOMBS WERE SHIPPED TO CHINA LAKE. AREA FRAGMENTATION AND BLAST TESTS ARE COMPLETE.	543.0	294.0	5.0	SEP 82	SEP 83
5 82 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT UNDERWATER TEST DATA RECEIVED FROM THE NAVY. SUSAN TEST ANALYSIS STILL OUTSTANDING. UPDATE GIVEN TO JTCG/MS IN JUNE 1983.	450.0			OCT 83	JAN 84
5 82 1600	THREE PIECE SHAFT FOR THE SUU-65/B TAILCONE ***** DELINQUENT STATUS REPORT *****					
5 82 1701	BULK TRANSFER OF CHEMICAL MATERIALS COMPLETED COLLECTION OF HEALTH/SAFETY DATA AND MATERIAL CHARACTERIZATION. CONTINUED MATERIAL HANDLING EQUIPMENT SURVEY AND ANALYSIS OF MATERIAL HANDLING PROCEDURES.	221.0	91.2	98.0	SEP 85	MAR 84
5 83 1701	BULK TRANSFER OF CHEMICAL MATERIALS COMPLETED COLLECTION OF HEALTH AND SAFETY DATA. CONTINUED ANALYSIS OF CURRENT AND PROPOSED HANDLING PROCEDURES AND EQUIPMENT SURVEY. INITIATED CONTRACT WITH AE FIRM TO AID IN FACILITY LAYOUT.	207.0	91.2	2.0	SEP 85	SEP 85
5 82 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES ISSUED SCOPE OF WORK FOR THREE AMMUNITION PLANTS AND REQUESTED COST/TIME ESTIMATES. RECEIVED RAW MATERIALS, WATER CHILLER AND OTHER EQUIPMENT.	500.0	25.0	300.1	JUL 84	JAN 84
5 83 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES ENGINEERING FIRM SELECTED FOR PLANS AND SPECIFICATIONS FOR INSTALLATION OF JAYGO MIXER AND OTHER EQUIPMENT.	446.0	60.0	35.8	JUL 84	JUL 84
5 82 1711	RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS PROCESS AND CRITERIA SURVEYS CONDUCTED. SMALL SCALE TESTS SHOW THAT RP WASTE IS VERY TOXIC TO AQUATIC LIFE AND MUST BE TREATED PRIOR TO RELEASE TO PBA CMTE. WASTE COLLECTION SYSTEM SELECTED AND SIZED. CONTRACTOR SELECTED TO PREPARE SPECS + DRAWINGS.	125.0	75.3	37.5	OCT 83	OCT 84
5 81 1907	AUTOMATED GAGING FLR MEDIUM CAL. PROJECTILE BODIES (CAM) PRIMARY EMPHASIS DURING THE PERIOD WAS ON THE COMPLETION OF THE PROTOTYPE GAUGING SYSTEM TO CHARACTERIZE THE FEATURES OF THE FORWARD FUSE MATING THREADS. THE TOP WAS PROVIDED TO ARRADCOM FOR APPROVAL.	542.9	10.3	245.1	SEP 83	DEC 84

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81 3961	IMPRVD VIBR ACCEPTANCE TESTING F/M732.XM587/724 FUZES ? S7A FABRICATION OF THE TEST SYSTEM IS ON SCHEDULE AND 50 PERCENT COMPLETE.	650.0	645.0	5.0	DEC 83	APR 83
79 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT TESTS WERE CONDUCTED ON THE INSPECTION MODULE RELATIVE TO ITS CAPABILITY TO REPEATEDLY DISTINGUISH DETONATOR DEFECT PARAMETERS. RESULTS HAVE CULMINATED INTO A PROPOSED RECOMMENDATION TO CEASE FURTHER CONTRACTUAL EFFORTS.	1,750.0	868.4	881.6	MAR 81	SEP 83
81 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT CONTINUED CONTRACT MONITORING AND COORDINATION OF IN-HOUSE EFFORTS.	403.5	67.5	316.9	SEP 81	MAR 84
79 4024	DSN DEV BLD PROT CUMP AND AUTO ASSY MACH M223 FUZE MANUFACTURING AND ASSEMBLY OF THE DETONATOR DETRAY MACHINE IS COMPLETE. THE MAJOR ASSEMBLIES HAVE BEEN DEBUGGED BY THE CONTRACTOR. MANUFACTURING AND ASSEMBLY OF THE 20 SPINDLE SLIDER ASSEMBLY MACHINE IS IN PROGRESS.	1,935.0	1,506.1	268.9	SEP 81	DEC 84
79 4046	QUANTITATIVE ANALYSIS OF BLENDED EXPLOSIVE SAMPLES TESTING OF PARAMETERS WHICH COULD AFFECT REPEATABILITY OF RESULTS WITH POLAROGRAPH COMPLETED. COMPARISON TESTING OF SPECIFICATION AND POLAROGRAPH TECHNIQUES COMPLETED. LATE RECEIPT OF REPROGRAMMED FUNDS CAUSED SLIPPAGE IN FINAL 301 REPORT.	307.0	35.0	269.9	NOV 80	DEC 83
82 4061	NITROQUANTUMINE PROCESS OPTIMIZATION A DRAFT INTERIM TECHNICAL REPORT WAS WRITTEN AND REVIEWED.	1,150.0	1,059.0	82.0	MAR 83	SEP 83
83 4061	NITROQUANTUMINE PROCESS OPTIMIZATION CONTRACTS WERE AWARDED TO INVESTIGATE AND TEST POLLUTION ABATEMENT PROCEDURES FOR THE NITROGUANIDINE PLANT AT SUNFLOWER AAP.	640.0	350.0	20.0	SEP 84	SEP 84
82 4062	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS THE PROTOTYPE SLURRY VACUUM FORMING MFG. ASSEMBLY + INSPECTION PRODUCTION LINE HAS BEEN INSTALLED AT ARMEC AND PRELIM. + FINAL ACCEPTANCE TEST PROGRAMS CONDUCTED DURING THE REPORTING PERIOD. THE FAB + TEST OF THE PAPER MOLDING PROTOTYPE WAS DONE.	3,352.0	2,974.2	365.3	SEP 84	SEP 84
82 4062 01	SLURRY VACUUM FORMING MFG SYS DURING THIS PERIOD THE MFG. SYS. WAS DEBUGGED + THE PRELIM. + FINAL ACCEPTANCE TEST PROGRAMS WERE PERFORMED WITH MODULE 1. IN ADDITION TO PERFORMING FELTING + DRYING + FINAL CONTAINER HALF MOLDING WITH MODULE 11.				SEP 83	SEP 83



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22 4-6-02	PAPER MULDING MANUFACTURING SYSTEM THE DESIGN + FABRICATION REQUIREMENTS TO CONVERT THE PAPER MULDING BASED MFG. SYS. FROM THE SOLVENT TYPE MULDING PROCESS TO THE HOT FORMING PAPER MULDING PROCESS HAVE BEEN COMPLETED BY THE CONTRACTOR.				JUL 84	SEP 83
5 82 406-03	ASSEMBLY SYSTEM BASED ON THE PRELIM. RESULTS THE TESTING WAS STOPPED AT INNUVA, INC AND RESUMED AT ARMYTEC DEFENSE PRODUCTS TO AVOID FURTHER SLIPPAGES + TO FACILITATE OVERALL ARDC PROJECT SUPPORT.				SEP 83	SEP 83
5 82 4062 06	PROTOTYPE PRODUCTION TOOLING THE FABRICATION + ASSEMBLY OF THE M205 PROTOTYPE PART MANUFACTURING TOOLING AND ASSOCIATED ASSEMBLY + INSPECTION GAUGING WAS COMPLETED IN JUNE 83. THE PROCESS CONTROL DOCUMENT AND THE PRODUCTION PROGRAM U.C MANUAL WAS SUBMITTED BY THE CONTRACTOR.					SEP 83
5 83 4-62	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS PROJECT MFG. HAS BEEN INTENSIFIED TO ACCELERATE THE EQUIPT. ACCEPTANCE TEST SCHEDULES AND TO MINIMIZE THE IMPACT OF THE COST-TO-COMPLET PROPOSALS SUBMITTED BY ESD.	250.0		69.1	JUN 84	JUN 84
5 82 4-75	UPGRADE SAFETY, READINESS, + PROD OF EXISTING MELT POUR LINES LOADING TESTS TO DEFINE AN IMPROVED COOLING PROCESS FOR TNT LOADED 155MM, M549 PROJECTILES WERE TERMINATED. THE AIR COOLING PROCESS WAS RECOMMENDED FOR UTILIZATION FOR MODERNIZATION PROJECT 5852677 AT IOWA AAF.	300.0	50.0	218.9	DEC 86	DEC 84
5 82 4145	CONTROL DRYING AUTL SB + BALL PROPELLANT MANUFACTURING GAS CHROMATOGRAPH INSTALLED, DEBugged AND MADE OPERATIONAL F/ LIVE PROPELLANT TESTING DURING CASBL PROVE-OUT. DATA INDICATES DRYING PROCESS TO BE WITHIN REQUIRED SPECS. HAZARUS ANAL COMPLETE. MILESTONS ADJUSTED TO REFLECT CASBLS LATEST PROVEDUT.	335.8	218.7	72.2	SEP 83	MAR 84
5 82 4145 32	CONTROL DRYING AUTL BALL PROP MFG PRELIMINARY TRIALS OF WC846 SHOWED THAT THE M+V CONTENT CORRELATES WITH PROPELLANT BED TEMPERATURE AS ANTICIPATED. MORE TESTS FOR WC846 AND WC872 PROPELLANT ARE PLANNED. SLIPPAGE CAUSED BY NEED FOR COMPETITIVE BIDS FOR EQUIPMENT.	143.4	41.4	65.1	SEP 83	NOV 83
5 78 4149	LOADING OF 30MM ADEN/DEFA HEUP AMMUNITION PROCESSES FOR IMPACT EXTRUSION OF PROJECTILE BODY FABRICATION, HOT FORGING OF SHAPE CHARGE LINER, AND HE CHARGING OF PROJECTILE BODY HAVE BEEN CLEARLY DEFINED. PROCESSES HAVE BEEN IMPLEMENTED AND THE FINAL REPORT IS IN PROCESS OF PUBLICATION.	500.0	405.7	92.8	MAY 79	NOV 83

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5 60 4150	NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION THE DUPLEX TOOLED BULLET ASSEMBLY MACHINE FINAL ACCEPTANCE TEST WAS CONDUCTED. IMPROVEMENTS IN THE LEAD SEATING OPERATION WILL BE EVALUATED FOR IMPLEMENTATION PRIOR TO PRODUCTION.	489.0	332.7	152.7	JUN 82	APR 84
5 81 4150	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS THE SKEWED AXIS ROLL FORMING PROTOTYPE EQUIPMENT FOR MANUFACTURE OF THE STEEL PENETRATOR IS SCHEDULED FOR INSTALLATION, TEST AND EVALUATION.	211.0	64.2	141.4	JUL 82	APR 84
5 82 4161	PRODUCTION TECHNIQUES FOR IMPROVED SMOKE MUNITION (61 MM) COMPLETED FEASIBILITY STUDY OF WSSYMOUNT DRYER, COMPARISON STUDIES OF PLANTARY AND MILLER BLENDERS, EVALUATION OF R+D BLENDING AND PRESSING PROCEDURES, AND DISTRIBUTED NSTL SENSITIVITY TEST REPORT.	476.0		166.0	JUL 83	JAN 84
5 80 4187	HIGH FRAGMENTATION STEEL PRODUCTION PROCESS TWO MONTH SLIP INCURRED DUE TO FIXTURE MODIFICATIONS TO MEASURE TOOL PRESSURE AND A MIXUP IN ORDERING AN AMPLIFIER FOR TOOL PRESSURE MEASUREMENT SYSTEM.	1,048.0	550.7	493.0	JAN 81	DEC 84
5 82 4200	TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS THE UPDATED HAZARD ANALYSIS WAS COMPLETED. THE DETAIL PACKAGE, SPECIFICATION AND MANUALS FOR THE FINAL DESIGN OF THE CRYSTALLIZER SYSTEM ARE IN THE FINAL STAGES OF COMPLETION.	364.8	188.4	148.0	DEC 84	DEC 85
5 80 4210	DRY CUTTING OF ENERGETIC MATERIALS JET CUTTER INSTALLED, DEBugged AND SUCCESSFULLY CUT INERT BENITE SIMULANT. A FLUORESCENT PURPLISH GLOW WAS EVIDENT WHILE CUTTING. CAUSE IS BEING INVESTIGATED. LIVE EVALUATION OF JET CUTTER SCHEDULED FOR THIS QUARTER.	622.2	453.7	146.5	MAY 82	DEC 85
5 61 4220	ON-LINE MONITORS FOR WATER POLLUTANTS PREPARATION OF FIELD MONITORS AND TESTING SITES HAS BEEN COMPLETED AT RAAP. FIELD TESTING HAS BEEN CONDUCTED AT THE FIRST SITE. SEVERAL MILESTONES HAVE BEEN EXTENDED FOUR QUARTERS TO ALLOW EXPANSION OF FIELD TESTING TO SIX SITES.	432.6	316.6	105.0	SEP 82	JUN 85
5 81 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS TECHNICAL REPORTS PREPARED FOR PHASE II-KAAP, PHASE I-LAAP AND PHASE I-MAAP. PHASE II WORK AT MAAP IS CONTINUING. EQUIPMENT REQUIRED FOR THE PILOT PLANT EVALUATION AT MAAP IS BEING PROCURED AND WILL BE INSTALLED BY THE END OF SEPTEMBER, 1983.	460.5	299.6	160.9	JUN 83	JUN 84
5 82 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS THE TREATMENT CHEMICAL AND WATER UTILIZATION SURVEYS AT PDA WERE BOTH COMPLETED. ALSO AT PDA EQUIPMENT AND MATERIALS WERE ORDERED TO EVALUATE THE USE OF CONTINUOUS CONDUCTIVITY AND PH MEASUREMENTS TO CONTROL BOTH TREATMENT CHEM USE/FLOW RATE AT CNIF.	313.0		153.8	JUN 84	JUL 84

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5 81 4266	MANUF, INSPECT + TEST EQUIP FOR MAGNETIC POWER SUPPLY DESIGN WORK HAS BEEN COMPLETED. THE MAGNETIC CHARGER, COIL WINDER, ASSEMBLY MLK STATIONS, MAGNETIC POWER SUPPLY, AND ACCEPTANCE TESTS + ARMING TIME TEST CONSOLES HAVE BEEN COMPLETED. ONLY THE WAVE SOLDERING EQUIP REMAINS TO BE COMPLETED.	759.0	483.0	261.0	SEP 83	SEP 83
5 81 4267	CONTINUOUS PROCESS FOR GRANULAR CUMP B THIS PROJECT IS BEING CONDUCTED BY DRCPM-PHM-E FOR THE DESIGN AND INERT TESTING OF A SPINNING CUP TO PRODUCE GRANULAR CUMP B.	175.0	158.8		SEP 82	DEC 83
5 82 4267	CONTINUOUS PROCESS FOR GRANULAR CUMP B PROCUREMENT EFFORTS FOR DESIGN OF LIVE TEST RIG HAVE BEEN TERMINATED. INERT TESTING AT VALIMET IS COMPLETED. DENSITY AND UNIFORMITY OF PILLS WERE WITHIN SPEC. ASSOCIATED FUNDS DUE TO TERMINATION WERE RETURNED.	80.0		68.0	MAR 84	MAR 84
5 82 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT REVIEW OF DIE DESIGN, EXTRUSION RATE, AND DRY DOWN DATA WAS CONTINUED. A PILOT TEST LINE ARRANGEMENT USING A 4-INCH PRESS WAS LAID OUT AND APPROVED TO ALLOW VARIOUS CUTTING AND HANDLING CONFIGURATIONS. PRELIMINARY HAZARDS ANALYSIS CONDUCTED.	821.2	698.2	110.0	DEC 83	DEC 85
5 86 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,215.6	904.2	311.4	JUN 82	SEP 83
5 80 4261 401	PROCESS ENERGY INVENTORY A TECH RPT WAS DISTRIBUTED. IT DOCUMENTS ENERGY CONSERVATION BASELINES FOR EIGHT PRODUCTION ITEMS. SEVERAL POTENTIAL ENERGY CONSERVATION PROJECTS WERE DEFINED TO REDUCE THE PRESENT ENERGY USE.	477.5	345.9	131.4	DEC 81	MAR 83
5 80 4281 A04	ENERGY RECOVERY FROM WASTE HEAT EQUIPMENT EVALUATION OF THE KETENE/AIR HEAT EXCHANGER HAS BEEN COMPLETED. THE KETENE FURNACE WAS OPERATED THROUGHOUT THE TESTING PERIOD WITHOUT ANY OPERATIONAL PROBLEMS. PERFORMANCE DATA INDICATED THAT FURNACE YLD AND QUAL WERE NOT ADVERSELY AFFECTED.	298.4	255.4	43.0	JUL 81	JEP 82
5 80 4281 A06	UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE EQUIPMENT WAS INSTALLED AND DEBUGGED. BENCH SCALE SET UP INCLUDED INSULATED PIPING, PRESSURE, AND TEMPERATURE INSTRUMENTATION, TAR TRAPS AND A SMALL BOILER TO CHECK COMBUSTION EFFICIENCIES.	292.4	190.4	102.0	JUN 82	SEP 83
5 81 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,137.8	539.1	357.1	SEP 84	JUN 85

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5 61 4281 A04	ENERGY RECOVERY FROM WASTE HEAT AN AMENDMENT TO THE SUM IS BEING NEGOTIATED AND WILL BE INCORPORATED WITH THE EXISTING SUM. THIS WILL ALLOW RADFORD TO EXTEND THEIR ENERGY CONSERVATION EFFORT TO THE SOLVENT DISTILLATION COLUMNS WHICH ARE OPERATING AT AN OVERALL LOW EFFICIENCY.	361.9	194.1	165.1	SEP 84	SEP 84
5 61 4281 A00	UNLOADED PRODUCER GAS FOR KETENE MANUFACTURE THE SYSTEM WAS CHECKED OUT USING INERT GAS, COLD CLEAN PRODUCER GAS AND HUT, UNSCRUBBED PRODUCER GAS. A DATA BASE WAS ESTABLISHED USING THE CLEAN PRODUCER GAS. OPERATIONS USING THE UNSCRUBBED GAS WERE COMPLETED.	129.6	76.6	47.0	MAR 84	SEP 83
5 81 4281 A00	CAVITATIONAL REMOVAL OF EXPLOSIVES THE DESIGN, INSTALLATION, AND TESTING OF THE PROTOTYPE SYSTEM THAT INCLUDES WATER RECIRCULATION AND EXPLOSIVE RECOVERY HAS BEEN COMPLETED. THE REPORT RECEIVED FROM THE CONTRACTOR IS BEING PREPARED FOR PUBLICATION.	231.0	174.6	55.0	JUN 83	SEP 83
5 91 4281 A10	USE OF BICMASS AS ENERGY SOURCES AT ARMY AMMUNITION PLANTS THE USE OF BICMASS AS A FUEL SOURCE WAS EVALUATED FOR THREE AAPs- LUNCHORN, TWIN LITLES, AND HOLSTON. A REVIEW OF THE FEASIBILITY STUDY TO USE BICMASS AS AN ALTERNATE BUIER FUEL AT MILAN, INDIANA, AND KANSAS AAPs WAS HELD AT THE PBMA.	271.8		258.2	SEP 83	MAR 84
5 01 4281 A10	POWER PRODUCTION FROM WASTE HEAT MAC/SAC WAS SELECTED TO BE THE SITE TO INSTALL AN ORGANIC RANKINE CYCLE ENGINE. PREPARATION OF PROCESS DESIGN CRITERIA AND AN INTERIM REPORT COVERING THE FIRST YEAR EFFORT WAS COMPLETED.	147.8	93.8	54.0	SEP 84	JUN 85
5 62 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,362.0	773.7	225.2	SEP 84	JUN 85
5 02 4281 A01	PROCESS ENERGY INVENTORY AT RADFORD AAP, THE INSTALLATION OF INSTRUMENTATION FOR MEASURING PROCESS VARIABLES IN THE TNT MANUFACTURING LINE WAS STARTED IN JUN 83. RAAP HAS REQUESTED A SIX MONTH EXTENSION OF THE PROJECT DUE TO LATE STARTUP OF THE TNT LINE.	193.7	136.7	55.0	JUN 84	JUN 84
5 02 4281 A04	ENERGY RECOVERY FROM WASTE HEAT CONSTRUCTION OF A PROTECTIVE SHELTER FOR THE HEAT PIPE HEAT EXCHANGERS WAS COMPLETED. INSTALLATION OF MEASURING INSTRUMENTATION, ELECTRICAL, AND HEATING SYSTEMS IN THE SHELTER WERE COMPLETED. SYSTEM EVALUATION WAS INITIATED.	419.4	282.0	105.4	SEP 84	SEP 84

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5 82 4281 A12	POWER PRODUCTION FROM WASTE HEAT A CONTRACT WAS LET TO ASSOC MECH CONTRACTORS OF GREENSBORO, NC TO DESIGN AND MFG A 100 KW SIZE ORGANIC RANKINE CYCLE ENGINE. WASTE HEAT FROM THE NAC/SAC WILL BE USED TO POWER THE RANKINE ENGINE TO GENERATE 440V ELECTRICITY FOR USE IN THE NAC/SAC BLDG.	427.0	355.0	64.8	JUN 84	JUN 85
5 82 4281 C01	PROCESS ENERGY INVENTORY AT PINE BLUFF ARSENAL INITIAL SURVEYS INDICATED THAT STEAM TRAPS WERE A CONSTANT SOURCE OF LOST ENERGY. A NEW DESIGN FOR STEAM TRAPS 'COLD TRAPS' WAS FOUND. THIS DESIGN DOES NOT RELEASE LIVE STEAM WHEN IN OPERATION.	322.0	297.0	23.3		JUN 84
5 81 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING PREPARED PRELIMINARY REPORT ON XM37 PROPELLANT. PUBLISHED FINAL REPORT ON OCTCL 75/25. SUBMITTED TEST PLAN FOR M-8 PROPELLANT.	441.0	270.0	154.2	SEP 83	SEP 83
5 82 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING CAST TNT SHAPES FOR CLOSE-IN TESTS WERE MANUFACTURED, X-RAYED, INSPECTED AND SHIPPED TO NSTL TEST SITE. TESTING IS 33 PERCENT COMPLETE.	251.0	60.0	89.9	JUN 84	JUN 84
5 82 4298	EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE THE DESIGN CRITERIA FOR THE DMN ABATEMENT SYSTEM WAS COMPLETED. THE PRELIMINARY HAZARDS ANALYSIS FOR THE ABATEMENT SYSTEM WAS COMPLETED.	390.0	124.0	256.5	DEC 83	DEC 83
5 83 4298	EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE THE SCOPE OF WORK WAS PREPARED AND APPROVED. A CONTRACT WAS AWARDED TO HOLSTON AAP AND USAMBRDL.	295.0	204.0		DEC 84	DEC 84
5 80 4309	PROPELLANT PROCESS DEVELOPMENT FOR 120MM TANK AMMUNITION SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,800.9	3,398.4	402.5	JUN 82	SEP 83
5 80 4309 01	DEVELOP MFG METHODS FOR STICK AND JA-2 PROPELLANT TECHNICAL REPORT IS BEING FINALIZED.	1,820.9	1,666.4	154.0	DEC 82	SEP 83
5 80 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP ALL MONIES ARE EXPENDED AND AWAITING COMPLETION OF FOLLOW-ON PROJECTS BEFORE SUBMITTING FINAL REPORT.	273.0	186.0	87.0	DEC 82	SEP 83
5 80 4309 03	ASSEMBLY PROCESS DEVELOPMENT THE FINAL REPORT ON THIS WORK IS IN PROGRESS AND WILL BE INCLUDED IN THE FY81 FINAL REPORT.	685.0	597.0	88.0	JUN 82	MAR 84
5 81 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,520.9	2,990.9	491.6	JUN 83	MAR 84

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5 81 4309 01	MFG METHODS FOR STICK + JA-2 PROPELLANT TEN BATCHES OF DEGM WITH ACID RECOVERY HAVE BEEN MADE. SWISS CUTTER WITH JET STREAM PNEUMATIC CONVEYOR SUCCESSFULLY EVALUATED AT A REDUCED EXTRUSION RATE ON THE FOUR INCH PRESS. TAKEAWAY EQUIPMENT AFTER DRUM CUTTER IS TO BE LIVE TESTED IN AUGUST 83.	984.0	795.0	184.5	JUN 83	SEP 83
5 81 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP-T EQUIPMENT HAS BEEN DEBUGGED AND PRESSING OF EXPLOSIVE CHARGES CONTINUING.	516.0	438.0	75.7	JUN 83	SEP 83
5 81 4309 03	ASSEMBLY PROCESS DEVELOPMENT THE PRIMER TORQUING, STAKING, DEPTH GAUGING AND RESISTANCE TEST STATIONS WERE INSTALLED AND ARE READY FOR ACCEPTANCE AND USE ON THE OPERATING LINE AT IDWA AAP.	920.0	810.0	102.6	JUN 83	MAR 84
5 81 4309 04	COMBUSTIBLE CARTRIDGE CASE PROCESS - 120MM FINAL REPORT FROM THE CONTRACTOR WAS SUBMITTED FOR FINAL APPROVAL.	215.0	185.0	25.0	JUN 83	DEC 83
5 81 4309 05	FORMING OF SABOT SEGMENTS TO NET SHAPE ON APFSUS AMMO A TOTAL OF 22 SETS OF SABOT SEGMENTS WERE MACHINED. THE FORGING DRAWINGS WERE REDESIGNED. ECONOMICS OF FORGING VS EXTRUSION PROCESS ARE BEING REASSESSED.	466.0	413.0	34.6	JUN 83	MAR 84
5 81 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS THE EVALUATION OF CUTTING TOOL INSERTS WAS COMPLETED, RESULTING IN THREE TOOL GRADES BEING CHOSEN. A MACHINING PROGRAM FOR USE IN FINISH MACHINING OF M833 PENETRATORS WAS COMPLETED. THE USE OF STEADYRESTS WAS DETERMINED TO BE BENEFICIAL TO MACHINING.	313.0	263.0	48.0	JUN 83	MAR 84
5 81 4309 12	INJECTION MOLDING OF XM629 OBTURATOR A TOTAL OF 50 MACHINED OBTURATORS WERE MOLDED BY THE RIM PROCESS. ALL WERE ACCEPTED, ASSEMBLED TO ROUNDS, AND AWAIT BALLISTIC TESTING. A CONTRACT TO INVESTIGATE INJECTION MOLDING METHODS WITH ZYTEL NYLON WAS AWARDED.	111.0	91.0	19.2	JUN 83	MAR 84
5 81 4309 21	BLENDED EXPLOSIVE, COMP R8151 PARAMETERS AFFECTING THE COATING OF RDX WERE IDENTIFIED. THREE PRODUCTION BATCHES WERE MADE AND ALL THREE WERE FOUND TO CONFORM TO SPECIFICATIONS. (THIS TASK WAS ORIGINALLY REPORTED UNDER TASK FOUR.)	103.7	75.4	11.0		DEC 83
5 81 4309 22	INSTALLATION OF VENTILATION EQUIPMENT IN BUILDING 5008-2 COMPLETED INSTALLATION OF THE VENTILATION EQUIPMENT. VALIDATION WILL TAKE PLACE DURING PROVE-OUT OF THE TAKEAWAY EQUIPMENT FOR TASK ONE. (THIS TASK WAS ORIGINALLY REPORTED UNDER TASK FOUR.)	64.9	64.9			MAR 84

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5 82 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,957.9	3,320.6	294.6	SEP 84	SEP 84
5 82 4309 02	EXPLOSIVE LOADING LF 120MM HEAT-MP A TOTAL OF 63 WARHEADS WERE PRESS LOADED AND FOUND TO MEET PHYSICAL SPECIFICATIONS. TEST FIRING OF 10 PROJECTILES WAS COMPLETED SUCCESSFULLY. IDWA AAP IS CONTINUING WORK ON THE STATIC SPIN TEST FACILITY. THE EXPLOSIVE MATERIAL WAS CHANGED TO COMP A3.	502.0	392.0	82.5	MAR 84	MAR 84
5 82 4309 04	COMBUSTIBLE CARTRIDGE CASE, 120MM THE SCOPE OF WORK FOR THE WHITE WATER POLLUTION ABATEMENT PORTION OF THIS TASK WAS COMPLETED. INSTALLATION OF EQUIPMENT FOR THE CONTINUOUS IMPREGNATION SYSTEM WAS STARTED.	2,704.0	2,305.0	64.6	MAR 84	MAR 84
5 82 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS THIS WORK IS BEING RECOMMENDED FOR CANCELLATION BECAUSE ROTARY STRAIGHTENING FOR PENETRATOR BLANKS NEGATED MOST OF THE BENEFITS OF REDUCED DISTORTION ANTICIPATED FROM IMPROVED HEAT TREATMENT BASKET DESIGNS.	433.3	373.0	56.6	MAR 84	MAR 84
5 80 4310	DMSO RECRYSTALLIZATION OF ROX/HMX TOXICITY STUDY OF AN-PROCESS STREAM SAMPLES FROM PREVIOUS DMSO PILOT PLANT OPERATIONS WAS COMPLETED. RESULTS INDICATED NO TOXICITY BUT HIGH MUTAGENICITY DUE TO NON-PROCESS RELATED COMPOUNDS.	349.0		348.1	JUN 81	SEP 83
5 77 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 INSTALLATION AND DEBUGGING OF THE OVERLAY/KILL MECHANISM MACHINE INITIATED. INSTALLATION OF THE DETONATING CORD WRAP MACHINE WILL BE DELAYED UNTIL DEBUGGING OF THE FIRST MACHINE IS COMPLETE. COMPATIBILITY TESTING OF CYANOACRYLATE ADHESIVE INITIATED.	1,452.9	1,184.1	268.6	AUG 78	JUN 84
5 81 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 THE FINAL TOP IS NOW AVAILABLE AT ARDC. AN ECP CONCERNING THE DESIGN OF THE OL/KM AND DETONATING CORD WRAP MACHINE TRAYS UTILIZING A SINGLE MOLD HAS BEEN APPROVED. PROCUREMENT OF THE TRAYS WAS INITIATED.	460.0	424.0	30.1	SEP 82	JUN 84
5 82 4312	ANTI-ARMOR CLUSTER MUNITION PRODUCTION EXPLOSIVE INJECTION THE REDESIGN OF THE PRODUCTION PROTOTYPE INJECTION HOLDING UNIT FOR CENS WAS COMPLETED. A BID PACKAGE FOR PROCURING A HOLDING UNIT WAS PREPARED. INVITATION FOR BIDS WERE ISSUED AND A VENDOR WAS SELECTED. THE INJECTOR UNIT IS BEING FABRICATED.	846.1	651.4	132.0	JUN 83	DEC 84

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5 80 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS A HYBRID PROCESS WAS EVALUATED. IT CONSISTS OF HAVING THE NC UNDERGO ONE-HALF BATCH ACID BOIL FOLLOWED BY CONICELL TREATMENT. LOW GRADE COTTON LINTERS WERE PURIFIED BY THIS PROCESS. THE MATERIAL MET THE NC SPECIFICATION REQUIREMENTS.	982.0	815.8	166.2	DEC 81	MAR 84
5 81 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS PLANS ARE BEING MADE TO USE SHORT TERM TESTS FOR ESTABLISHING THE ACCEPTABILITY OF STORAGE LIFE OF PROPELLANT MADE WITH CONICELL PURIFIED NC. THE TESTS ARE BASED ON MEASURING STABILIZER DEPLETION AFTER HIGH TEMPERATURE STORAGE.	617.0	215.6	350.0	MAR 83	DEC 83
5 82 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS M31A1 PROPELLANT WAS MANUFACTURED USING LOW GRADE COTTON LINTER NC PURIFIED BY THE HYBRID PROCESS. LABORATORY EVALUATION AND BALLISTIC TESTS WILL BE CONDUCTED WITH THIS MATERIAL.	368.9	158.9	2.1	SEP 83	JUN 84
5 81 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT THIS PROJECT IS COMPLETED.	200.0		200.0	DEC 82	JUL 83
5 82 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT THE OF DISTILLATION COLUMN AND CONTROL PANEL WERE DELIVERED AND INSTALLATION INITIATED. ADSORPTION MATERIALS WERE CHOSEN FOR THE VAPOR PHASE PURIFICATION OF THE HCL BY-PRODUCT STREAM.	380.0	180.0	45.0	NOV 83	FEB 84
5 78 4349	MODERNIZATION OF PRESS LOADING FOR HEP PROJECTILES ***** DELINQUENT STATUS REPORT *****				JUN 80	SEP 83
5 80 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 SEE PROJECT 5 82 4357 FOR STATUS.	554.0	450.0	104.0	JUN 83	FEB 84
5 82 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 THE APPLICATION TEST CONTRACT WAS AWARDED IN JUNE 82. THE APPLICATION TESTING IS IN ITS FINAL PHASE. IT IS ANTICIPATED THAT THE TEST WILL BE COMPLETED IN SEPT 1983. FINAL INSTALLATION IS SCHEDULED FOR 15 SEPTEMBER 1983.	124.0	69.0	36.0	OCT 83	FEB 84
5 82 4364	ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS BIOLOGICAL MONITORING INC., CONTINUED THE ACCUMULATION OF DATA FROM ACUTE BIOASSAY AND VENTILATORY RESPONSE TESTS OF THE COLLECTED WASTEWATER SYSTEM AND THE CENTRAL WASTEWATER TREATMENT FACILITY. PREPARATION OF A MANUAL FOR THE SYSTEM CONTINUED.	290.0	227.0	54.0	SEP 83	DEC 83
5 82 4406	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS SEVENTEEN RUNS WERE MADE WITH THE BENCH SCALE RDX/HMX COPRODUCT NITROLYSIS REACTOR. A 30 PERCENT YIELD OF HMX WAS ACHIEVED. TWO COPRODUCT SEPARATION PROCESSES WERE DEVELOPED. ONE UTILIZED SPENT ACETIC ACID THE OTHER DMSO AND CYCLOHEXANONE.	620.1	494.1	70.6	DEC 83	JAN 84



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5 80 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS THIS PROJECT HAS BEEN COMPLETED.	115.0		115.0	MAY 81	SEP 81
5 81 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS INSTALLATION OF EQUIPMENT AT PBA WAS COMPLETED. INITIAL ATTEMPT TO PNEUMATICALLY CONVEY RP RESULTED IN A FIRE. THIS WILL CAUSE A DELAY IN PROJECT COMPLETION. MATERIALS HANDLING STUDIES OF MANGANESE DIOXIDE WAS COMPLETED.	165.0	30.0	127.0	SEP 82	SEP 83
5 82 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS FIRE DETECTION AND SUPPRESSION STUDIES HAVE BEEN COMPLETED. UV DETECTOR/WATER DELUGE SYSTEM SUCCESSFULLY DEMONSTRATED. INITIATED PREPARATION OF PRELIMINARY HAZARDS ANALYSIS.	458.0	106.0	305.0	SEP 83	SEP 84
5 79 4444	BODY FOR M42/M46 GRENADE THE DAYRON CONTRACT WAS TERMINATED ALL PARTS WERE SHIPPED TO THE GOVERNMENT. M8A GRENADE BODIES THAT MEET THE SPECIFICATIONS WILL BE SHIPPED TO LUNE STAR FOR LOADING PRIOR TO TESTING AT YUMA PROVING GROUNDS.	563.0	211.7	219.6	SEP 80	MAR 84
5 83 4444	BODY FOR M42/M46 GRENADE --- JUST FUNDED. NC 301 REQUIRED. ---					
5 81 4449	PROCESS IMPROVEMENT FOR COMPOSITION C-4 DEWATERING OF LX14-O, PBX0280 AND W109 PRECOAT USING THE EIMCO FILTER WAS SUCCESSFULLY COMPLETED. THE NAUTA/MIXER DRYER WAS RECEIVED AND TESTED. RESULTS INDICATED DRYING C4 NOT VERY EFFICIENT. WOLVERINE DRYER HAS BEEN REACTIVATED.	290.1	191.1	97.6	JUN 83	SEP 83
5 83 4449	PROCESS IMPROVEMENT FOR COMP C-4 THE SCOPE OF WORK WAS COMPLETED AND CONTRACT AWARDED TO MULSTON AAP IN JUNE 83.	500.9	305.9	10.7	MAR 85	MAR 85
5 83 4453	DETERMINE SPACING OF MUNITION ITEMS TO PREVENT PROPAGATION PROJECT JUST FUNDED. NO FUNDS WERE EXPENDED.	213.0			SEP 84	SEP 84
5 79 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT 5 82 4454 FOR STATUS.	878.0			DEC 81	DEC 84
5 80 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT 5 82 4454 FOR STATUS.	1,298.0			APR 82	DEC 84
5 81 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT 5 82 4454 FOR STATUS.	1,885.0			UCT 82	DEC 84

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5 82 4454	AUTO INSPECTION DEVICE EXPLOD CHARGE SHELL (AIDEC) CAM THE 301 REPORT WAS RETURNED TO THE ORIGINATOR FOR FINANCIAL CLARIFICATION.	1,882.0			JUL 83	DEC 84
5 79 4469	AUTOMATIC INSERTION OF GRENADE LAYERS THE TOP WAS PLACED UNDER FORMAL DOCUMENTATION CONTROL. ADDITIONAL FUNDS WERE TO BE REQUESTED TO COMPLETE THE INSTALLATION OF EQUIPMENT AT KANSAS AAP.	1,146.5	933.5	213.0	JAN 80	JUN 84
5 80 4469	AUTOMATIC INSERTION OF GRENADE LAYERS THE FINAL TECH RPT WAS DISTRIBUTED. GRENADE INSERTION SYSTEM IS AT KANSAS AAP. INSTALLATION IS PLANNED FOR 4Q83.	350.0	177.3	47.7	JAN 81	JUN 84
5 80 4484	IMPROVED HI-SPEED WATERPROOFING APPLICATION F/SC AMMO LAKE CITY AAP IMPROVED THE EFFICIENCY OF THE SCAMP PRIMER INSERT SUBMODULE WITH A NEW TOOL MODULE THAT INCREASED PERFORMANCE AND A CENTRAL STORAGE TANK THAT REDUCES MAINTENANCE.	126.0	93.0	31.8	MAR 82	SEP 83
5 82 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES THIS IS AN ORDERLY TRANSITION OF PROJECTS 5XX4114 POLLUTION ABATEMENT FOR P&E AND PROJECT 57X4214 POLLUTION ENGINEERING FOR 1983-5 REQUIREMENTS AND IS DIRECTED TO MEETING FUTURE STANDARDS. REFER ALSO TO INDIVIDUAL TASKS.	1,356.7	1,002.3	233.1	DEC 84	SEP 84
5 82 4489 01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES ALL PILOT SCALE EQUIPMENT FOR CHEMICAL FIXATION OF LEAD BEARING SLUDGE RECEIVED AND INSTALLED AT LSAAP. COMPRESSION AND LEACHING STUDIES BEGUN. PILOT SCALE EQUIPMENT FOR CASO4 REGENERATION STUDIES INSTALLED OR CONSTRUCTED AT RAAP.	429.0	367.9	42.7	DEC 84	SEP 84
5 82 4489 02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER) DEBUG/TEST OPERATIONS OF LOGIC PROGRAM FOR THE PROGRAMMABLE CONTROLLER CONTINUED. PROCUREMENT/INSTALLATION OF EQUIPMENT/MATERIALS IS 92 PCT COMPLETED. SECOND AND FINAL YEAR OF THIS PROGRAM DEFERRED TO FY84. COST FOR THIS WILL INCREASE BY 32 PCT.	370.5	255.5	65.5	DEC 84	SEP 84
5 82 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER WORK IS BEING CONFINED TO CARBON ADSORPTION TERTIARY TREATMENT. THE REMAINING TECHNOLOGIES, UV/OZONOLYSIS, CATALYTIC HYDROGENATION AND FREE RADICAL OXIDATION WILL BE DEFERRED TO A FUTURE PROGRAM.	148.8	110.8	25.7	DEC 84	SEP 84
5 82 4489 05	ADVANCED AIR EMISSIONS ABATEMENT PILOT PLANT SIMULATING 1/25 SCALE OF PICCOLD SCRUBBER ON THE NC MANUFACTURING FACILITY AT BADGER AAP COMPLETED AND INSTALLED IN JUNE 1983. CHECKOUT AND TESTING STARTING JULY.	410.0	268.0	99.2	DEC 82	MAR 85

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5 83 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES EFFORT 4489 REPRESENTS AN ORDERLY TRANSITION OF PROJECTS 5XX4114 POLLUTION ABATEMENT METHODS FOR P+E AND PROJECTS 57X4214 POLLUTION ENGINEERING FOR 1983-5 REQUIREMENTS AND IS DIRECTED TO MEETING FUTURE STANDARDS. TASK 3 IS ONLY ONE FUNDED IN FY83.	86.0	65.0	1.4	SEP 86	SEP 86
5 83 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER THIS TASK WAS RECENTLY FUNDED. A CONTRACT WAS JUST AWARDED. TESTING AND EVALUATION HAVE JUST BEGUN.	86.0	65.0	1.4	SEP 86	SEP 86
5 79 4498	CONSOLIDATION AND AUTOMATIC ASSEMBLY OF SMALL MINES ALL TECHNICAL WORK SCHEDULED HAS BEEN COMPLETED, EXCEPT FOR FINAL PROVE-OUT OF EQUIPMENT. SOLDERING MACHINE IS COMPLETE AND INSTALLED AT IOWA ARMY AMMUNITION PLANT. FINAL PROVE OUT OF THE SOLDERING MACHINE IS SCHEDULED FOR SEPTEMBER 1983.	572.0	480.0	92.0	SEP 80	DEC 83
5 80 4498	CONSOLIDATION AND AUTOMATIC ASSEMBLY OF SMALL MINES MECHANIZED LOAD ASSEMBLE AND PACK EQUIPMENT IS COMPLETE AND INSTALLED AT IOWA ARMY AMMUNITION PLANT. EQUIPMENT DOCUMENTATION HAS BEEN DELIVERED. FINAL PROVE OUT OF ALL EQUIPMENT ESTABLISHED BY THIS THREE YEAR EFFORT IS SCHEDULED FOR SEPTEMBER 1983.	487.4	100.0	360.9	DEC 81	DEC 83
5 81 4503	NEW PROCESS FOR SAMS TRACER AMMUNITION THE INITIAL DEMONSTRATION OF PROTOTYPE CONVENTIONAL PROCESS EQUIPMENT CONFIGURED FOR THE MANUFACTURE OF THE SAMS M856 TRACER CARTRIDGE WAS COMPLETED. THIS 25K PIECE DEMONSTRATION WILL BE FOLLOWED BY A LARGER RUN AFTER CORRECTIVE ACTION IS TAKEN.	500.0	402.4	97.6	AUG 82	APR 84
5 82 4503	NEW PROCESS FOR SAMS TRACER AMMUNITION THE INITIAL DEMONSTRATION OF PROTOTYPE CONVENTIONAL PROCESS EQUIPMENT CONFIGURED FOR THE SAMS CARTRIDGE WAS COMPLETED. THIS 25K PIECE DEMONSTRATION WILL BE FOLLOWED BY A LARGER RUN FOR FINAL ACCEPTANCE AFTER CORRECTIVE ACTIONS ARE TAKEN.	129.0		74.3	SEP 83	APR 84
5 81 4506	5.56 MM CARTRIDGE LINKING SYSTEM A STATEMENT OF WORK WAS COMPLETED AND A CONTRACT AWARDED TO REMINGTON ARMS COMPANY FOR A CARTRIDGE LINKING MACHINE SYSTEM.	573.0	406.0	167.0	JAN 83	SEP 84
5 82 4506	5.56MM CARTRIDGE LINKING SYSTEM DESIGN, FABRICATION, DEBUG, INSTALLATION AND FINAL ACCEPTANCE OF THE SAMS 5.56MM CARTRIDGE LINKING MACHINE SYSTEM HAVE BEEN COMPLETED. CONTRACT HAS BEEN AWARDED TO INNOVA, INC., CLEARWATER, FL. FOR THE LINK UNSCRAMBLER, ORIENT AND FEED SYSTEM.	522.0	283.0	130.0	JAN 84	SEP 84
5 80 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS DELIVERY OF THE WYSSMONT DRYER HAS BEEN DELAYED DUE TO UNRESOLVED LEGAL PROBLEMS. ALTERNATIVES ARE BEING INVESTIGATED.	505.8	333.8	171.3	APR 82	DEC 83

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5 82 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS INVESTIGATION OF BATCH DRYING PROCESSES FOR A COMPOSITIONS WAS INITIATED. A SCOPE OF WORK WAS PREPARED FOR DRYING EVALUATION.	615.9	337.9	43.0	SEP 84	MAR 85
5 82 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS BENCH SCALE PROGRAM FOR THE CATALYTIC HYDROGENATION OF SPENT ACETIC ACID SLUDGE FROM THE B-LINE COMPLETED. PREPARATION OF DESIGN FOR SLUDGE FACILITY IS UNDERWAY. USE OF NH3 IN LIEU OF AMMONIUM ACETATE AS A NEUTRALIZING AGENT FOR HNO3 DEMONSTRATED.	301.9	216.9	40.0	DEC 83	OCT 83
5 83 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS CONTRACT AWARDED TO HOLSTON AAP 24 JUNE 1983. THIS PHASE WILL PREPARE DESIGN FOR NH4NO3 SLUDGE PURIFICATION FACILITY FOLLOWED BY PROCUREMENT AND PARTIAL INSTALLATION OF PROTOTYPE SCALE (UP TO 1800 LBS/HR) EQUIPMENT.	420.0	337.0	4.1	UCT 85	OCT 85
5 82 4529	MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES THE SHEAR FORMING PROCESS HAS BEEN IDENTIFIED AND A SCOPE OF WORK PREPARED. PROCUREMENT ACTION HAS BEEN INITIATED.	525.0		28.0	SEP 82	DEC 84
5 83 4529	MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES --- JUST FUNDED. NO 301 REQUIRED. ---					
5 83 4533	LOVA PROPELLANT PROCESSING NOS HAS DRAWN UP AN IN-PROCESS HAZARDS ASSESSMENT TEST MATRIX. NOS INITIATED A LITERATURE SEARCH TO COMPILE AND ANALYZE EXISTING IN-PROCESS HAZARDS DATA FOR LOVA RUN MATERIALS, PRIMARILY RDX AND NC.	398.0		36.7	SEP 84	SEP 84
5 82 4534	XN855 BULLET CONVERSION OF SCAMP EQUIPMENT COST GROWTH REQUESTED TO INCREASE THE CONTRACT VALUE BY 135K TO INCORPORATE CHANGES REQUESTED BY AMCCOM AND LAKE CITY AAP FOR THE TIP I-D. APPLICATION ON A SCAMP LOAD + ASSEMBLE SUBMODULE, DCAA CONCURRED WITH THE REQUESTED COST GROWTH.	264.0	204.1	46.8	SEP 83	SEP 83
5 83 4534	SAWS BULLET CONVERSION OF SCAMP EQUIPMENT FUNDING WAS AVAILABLE ON 10 FEB 83. AWARD OF CONTRACTS FOR DEVELOPMENT OF PENETRATOR FEED SYSTEM AND BULLET SUBMODULE CONVERSION IS ANTICIPATED BY 30 SEPT 83.	812.0		8.1	APR 85	APR 85
5 83 4538	5-56 SAWS LINK ORIENTER AND FEED SYSTEM A CONTRACT WAS AWARDED TO INNOVA, INC., CLEARWATER, FL. IN MARCH 83 AND THE LINK ORIENT, INSPECTION AND FEED SYSTEM DESIGN WAS INITIATED.	398.0	315.0		MAR 85	MAR 85

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5 83 4540	CAC03 COATING OF 7.62MM BALL PROPELLANT WITH THE CONCORDANCE OF PHM, THIS PROJECT IS NOW AT BADGER AAP INSTEAD OF OLIN, ST. MARKS, FL, AS ORIGINALLY PLANNED. A REVISED SOW SUBMITTED IN MAY AND A CONTRACT AWARDED TO BADGER IN JUNE. SOW REDUCED TO REFLECT REDUCTION OF FUNDING.	114.6	56.6	18.7	JUL 84	JUL 84
5 83 4547	PROC TECH FOR XM76 IR SCREENING GEN ' XM49 SMOKE GENERATOR ***** DELINQUENT STATUS REPORT *****					
5 82 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	490.2	182.2	296.2	JUL 83	APR 84
5 82 4548 01	SAFETY ENHANCEMENT OF BATCH MIX MULLERS A REPORT WAS PREPARED ON REMOTE SCRAPE-DOWN PROCEDURES.	172.0		157.2	FEB 83	JUN 83
5 82 4548 02	SAFETY ENHANCEMENT TRANSPORT + CONVEYING A TECHNICAL REPORT WAS PREPARED BY SOUTHWEST RESEARCH INSTITUTE ON REMOTE LOADING AND CONVEYING SYSTEMS.	123.2	68.2	43.2	JUL 83	NOV 83
5 82 4548 03	IMPROVEMENT OF FIRE SUPPRESSION SYSTEMS INITIAL TESTING OF FIRE SUPPRESSION SYSTEM USING STARTER MIXES WAS COMPLETED AT SMRI. DETECTION WAS ACCOMPLISHED WITH UV DETECTORS.	101.3	59.3	42.0	JUN 83	DEC 83
5 82 4548 04	BAY DESIGN SAFETY ENHANCEMENT ON SITE SURVEYS OF FIVE FACILITIES WERE COMPLETED WITH TOURS OF CRANE AAP AND LAKE CITY AAP. DRAWING AND PYROTECHNIC COMPOSITION LISTS WERE EVALUATED.	93.7	54.7	38.0	MAY 83	MAR 84
5 83 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	1,110.8	665.0	17.0	SEP 84	SEP 84
5 83 4548 01	MIXER SAFETY ENHANCEMENT SCOPE OF WORK PREPARED TO STUDY THE EFFECTS OF REMOTE SCRAPE DOWN PROCEDURES ON PRODUCTION TYPE MIX MULLERS.	299.0	115.0	6.0	SEP 84	SEP 84
5 83 4548 02	TRANSPORT AND CONVEYING SAFETY ENHANCEMENT A SCOPE OF WORK WAS PREPARED TO SELECT AND MODIFY A PRODUCTION AREA AT CRANE AAA TO CONTAIN THE PROTOTYPE TRANSPORT AND CONVEYING SYSTEM.	335.8	255.0	6.0	SEP 84	SEP 84
5 83 4548 03	QUENCHING SAFETY ENHANCEMENT CONTRACT IS UNDER NEGOTIATION WITH SMRI TO CONTINUE FIRE SUPPRESSION TESTING.	280.0	170.0	3.0	SEP 84	SEP 84

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5 83 4548 04	BAY DESIGN SAFETY ENHANCEMENT A SCOPE OF WORK WAS PREPARED TO DETERMINE THE EFFECTS OF PYROTECHNIC ACCIDENTS AND TECHNIQUES FOR PREVENTING PROPAGATION.	196.0	125.0	2.0	APR 84	APR 84
5 82 4551	MANUFACTURING PROCESS PARAMETER FOR XM855/856 AMMO FIRST ARTICLE SAMPLES WERE FABRICATED AND TESTED. SATISFACTORY RESULTS EXCEPT FOR FUNCTION AND CASUALTY DEFECTS. A ROOT CAUSE IS BEING INITIATED TO DETERMINE THE CAUSE OF THE DEFECTS.	619.0	83.0	272.0	MAR 83	APR 84
5 81 4555	INFRARED MONITORING OF PYROTECHNIC BLENDING THE THERMOGRAPHY UNIT HAS BEEN USED TO STUDY THE BLENDING OF RESINS + INERT MIXES. EFFECTIVENESS FOR DETERMINING BLENDING PATTERN NOT ESTABLISHED. PROJECT HAS BEEN EXTENDED TO INCLUDE OTHER PARAMETERS + SEVERAL BINDERS. VAPOR SYSTEM SENT TO CRANE.	250.0		172.0	JUN 82	JUN 84
5 82 4557	ARBAT THIS PROGRAM IS PROCEEDING IN ACCORDANCE WITH THE TECHNICAL PLAN. HOWEVER, DELAY IN THE REVISED SOFTWARE TRACKING PROGRAM TEST HAS DELAYED THE PROGRAM TWO MONTHS. THE SYSTEM SHOULD BE OPERATIONAL BY JULY 1983.	2,500.0	2,247.0	125.6	JUN 84	JUL 84
5 82 4560	MDD TAPE-STIFFENER ASSEMBLY PROCESS - M42/M46 GRENADES OFF-LINE TESTING, DEBUGGING, AND ACCEPTANCE OF THE MAIN ASSEMBLY DIAL WAS COMPLETED. CONTROL SYSTEM AND INDEX WHEEL IMPROVEMENTS WERE MADE. ON-LINE SET-UP AND TESTING POSTPONED UNTIL LATE JULY 83.	141.5	106.5	20.3	JUN 83	SEP 83
5 82 4563	XM803 METAL PARTS PRODUCTIVITY SEE SUB-TASKS.	768.0	525.1	190.7	JUN 84	JUN 84
5 82 4563 01	IMPROVED STRAIGHTNESS OF DU PENETRATOR BLANKS WORK ON BASELINE DATA COMPLETE. ROTARY STRAIGHTENING WORK HAS BEEN COMPLETED WITH ROLLING AFTER EXTRUSION IS NEARING COMPLETION.	303.1	278.1	14.6	JUN 84	JUN 84
5 82 4563 04	HEAT TRANSFER AND RESIDUAL STRESS PRELIMINARY EFFORTS INTO COMPUTER MODELING OF THE DU BAR QUENCH OPERATION HAVE BEEN COMPLETED. AMRC HAS COMPLETED INVESTIGATION OF THREE RADIATION SOURCES WITH COPPER APPEARING TO BE THE MOST EFFECTIVE.	110.5		109.5	MAR 84	JUN 84
5 82 4563 05	REDUCTION OF CHIPS OXIDATION ARGON ASSISTED MACHINING TRIALS COMPLETED. FINAL REPORT IN PREPARATION.	169.0	99.5	52.0	MAR 84	MAR 84

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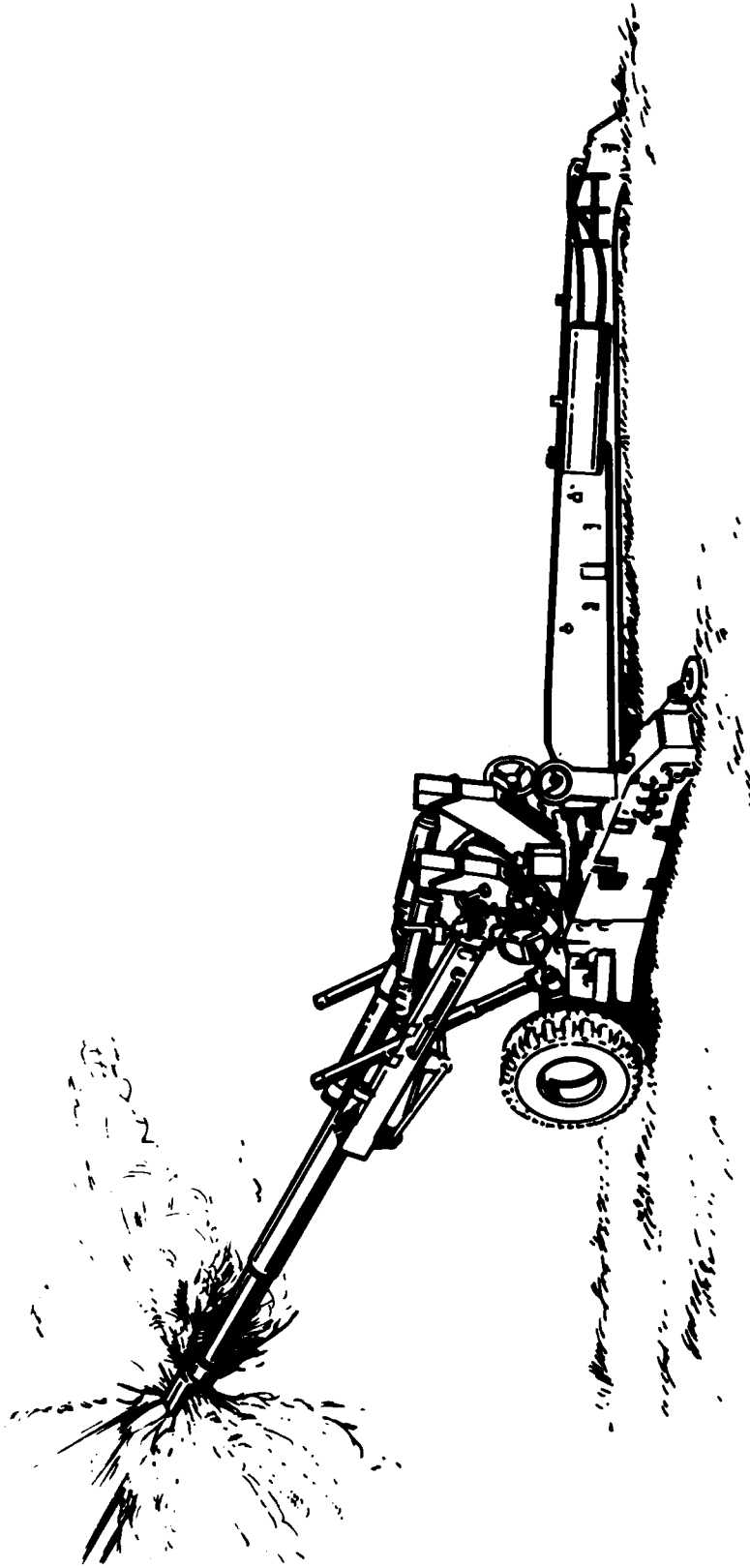
PROJ NO. TITLE + STATUS

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5 83 4563	PROCESS IMPROVEMENT FOR TANK DU PENETRATORS SEE SUB-TASKS.	2,625.0		58.2	SEP 85	SEP 85
5 83 4563 02	SALT BATH SOLUTION HEAT TREAT FOR DU PENETRATORS CONTRACTOR HAS COMPLETED COLLECTION OF BASELINE DATA AND DETERMINED THE BEST VACUUM OUTGAS/SALT SOLUTIONIZE CYCLE. CONTRACTOR HAS BEGUN PROCESSING 40 BLANKS TO FINISHED PENETRATORS TO PROVEDUT CYCLE.	185.4	147.1	14.6	MAR 84	MAR 84
5 83 4563 04	HEAT TRANSFER AND RESIDUAL STRESSES OAK RIDGES Y12 FACILITY HAS BEEN CONTACTED AND THE BASICS OF A JOINT PROGRAM IN THE SECOND YEAR OF EFFORT HAVE BEEN DEVELOPED. IVD COATING OF A DU BAR HAS BEEN COMPLETED AND FINAL MEASUREMENT WITH THE BAR STRESSED TO KNOWN LEVELS ARE BEING MADE.	283.5		20.4	JUN 85	JUN 85
5 83 4563 05	REDUCTION OF CHIP OXIDATION DESCRIPTION OF WORK HAS BEEN PREPARED.	146.5		2.2	MAR 85	MAR 85
5 83 4563 06	RECYCLING OF STABALLOY MACHINING CHIPS SCOPE OF WORK COMPLETED AND PROCUREMENT PACKAGES FORWARDED TO PROCUREMENT WITH ANTICIPATED CONTRACT AWARD DATE OF 1 OCT 1983.	782.0		10.0	SEP 85	SEP 85
5 83 4563 07	FORMING TC NEAR NET SHAPE A SCOPE OF WORK HAS BEEN COMPLETED AND A PROCUREMENT PACKAGE ASSEMBLED AND FORWARDED TO PROCUREMENT FOR CONTRACT AWARD BY 1 OCT 83.	426.5		8.4	JUN 85	JUN 85
5 83 4563 08	NON-DESTRUCTIVE TESTING OF A PREFORMED SHAPE A DOW HAS BEEN PREPARED AND SENT TO THE DOE ROCKEY FLATS FACILITY FOR INITIATION OF WORK IN 1ST QTR 1984.	227.5		3.4	JUN 85	JUN 85
5 83 4563 11	PROCESS IMPROVE FOR DU REMETRATORS-MG F2 LINERS SCOPE OF WORK COMPLETED AND PROCUREMENT PACKAGES FORWARDED TO PROCUREMENT WITH ANTICIPATED CONTRACT AWARD DATE OF 1 OCT 1984.	331.5		5.3	SEP 85	SEP 85
5 83 4563 16	QUENCH PARAMETERS FOR HEAT TREATING DU A SCOPE OF WORK HAS BEEN COMPLETED AND A PROCUREMENT PACKAGE ASSEMBLED AND FORWARDED TO PROCUREMENT FOR CONTRACT AWARD BY 1 OCT 83.	427.5		8.5	JUN 85	JUN 85
5 83 4605	PROPELLANT BED DEPTH CONTROL IN CASBL AIR DRY FUNDS WERE RECEIVED AND OBLIGATED TO RADFORD AAP. TWO VENDORS WERE CONTACTED TO DISCUSS TYPE OF INSTRUMENTATION AVAILABLE TO DETERMINE PROPELLANT DEPTH.	579.0	461.0	10.6	JUL 84	JUL 84

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5 82 6599	ELECTRO-OPTICAL INSPECTION OF ARTILLERY PROJ OPT CAVITY ALL DEFECT DETECTING ELECTRONICS CIRCUITRY HAS BEEN CHECKED FOR PROPER OPERATION AND ADJUSTMENTS OPTIMIZED. THE ONLY CIRCUIT STILL REQUIRING ADJUSTMENT IS ONE THAT INHIBITS FALSE REJECT SIGNALS.	75.0		30.0	SEP 83	SEP 83
5 79 6693	BALL PROPELLANT DETERRENT COATING-CAM RELATED DRAFT OF FINAL REPORT BEGUN DURING THE PERIOD. IT WILL BE FINISHED, REVIEWED AND EDITED BY THE END OF THE NEXT REPORTING PERIOD.	171.0	27.5	132.4	NOV 80	DEC 83
5 81 6716	DEV CUMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPTS THIS PROGRAM IS COMPLETE. THE FOUR INDIVIDUAL METALFORMING MODELS WERE CONSOLIDATED INTO AN INTEGRATED SYSTEM. THE SYSTEM IS OPERATIONAL AT BATTELLE AND IS BEING TRANSFERRED TO AMCCOM.	177.0	131.0	36.0	DEC 82	DEC 83





**ARMAMENT, MUNITIONS AND CHEMICAL COMMAND  
(AMCCOM)  
(WEAPONS)**

**CURRENT FUNDING STATUS, 1ST CY83**

FISCAL YEAR	NC. OF PROJECTS	AUTHORIZED FUNDS (\$)	CONTRACT ALLOCATED (\$)	CONTRACT FUNDING EXPENDED (\$)	INHOUSE REMAINING (\$)	FUNDING EXPENDED (\$)
76	1	280,000	43,100	43,100 (100%)	236,900	45,900 (19%)
77	0	0	0	0 (0%)	0	0 (0%)
77	2	1,205,000	1,001,300	984,300 (98%)	203,700	173,100 (84%)
78	1	77,000	0	0 (0%)	77,000	77,000 (100%)
79	3	490,600	329,600	287,000 (87%)	161,000	155,900 (96%)
80	12	3,207,200	1,411,800	959,600 (67%)	1,795,400	1,419,000 (79%)
81	21	5,744,200	3,186,000	1,360,000 (42%)	2,558,200	1,242,500 (48%)
82	42	9,906,500	1,860,800	389,500 (20%)	8,045,700	2,366,900 (29%)
83	16	3,634,000	0	0 (0%)	3,634,000	65,800 (1%)
TOTAL	98	24,544,500	7,832,600	4,023,500 (51%)	16,711,900	5,546,100 (33%)
AUTHORIZED FUNDING		CONTRACT ALLOCATED 32%		INHOUSE REMAINING 68%		

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6 77 7201	ARTILLERY WEAPON FIRING TEST SIMULATOR INSTALLATION OF THE EQUIPMENT IS COMPLETE. THE FINAL REPORT IS BEING PREPARED.	820.0	699.6	120.4	OCT 78	SEP 83
6 79 7482	MODIFIED RIBBON RIFLING GENERATING MACHINE FEASIBILITY STUDIES HAVE BEEN COMPLETED AND ARE BEING EVALUATED BY NVA PERSONNEL.	76.0	40.0	34.1	APR 81	SEP 83
6 76 7580	PILOT AUTOMATED SHOP LOADING AND CONTROL SYSTEM- CAM FINAL IMPLEMENTATION ACTIONS CONTINUING DURING THE PERIOD. THE PROJECT IS TECHNICALLY COMPLETE EXCEPT FOR THE FINAL TECH. REPORT WHICH IS IN DRAFT FORM BUT HAS BEEN DELAYED DUE TO DEVELOPMENT WORK ON OTHER PROJECTS.	280.0	43.1	45.9	SEP 78	DEC 83
6 79 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING WAITING FOR TECHNICAL REPORT.	127.0	22.0	105.0	MAR 80	DEC 83
6 80 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING LARGE MOLDING SYSTEM HAS BEEN INSTALLED. ALUMINUM BOTTOM BOARDS HAVE BEEN INSTALLED. SYSTEM IS BEING DEBUGGED.	253.0		187.0	FEB 82	JAN 84
6 82 7707	AUTOMATED PROCESS CONTROL FOR MACHINING COMPUTER PROCEDURES FOR DETERMINING ECONOMIC TURNING OPERATIONS WERE ESTABLISHED AND DEMONSTRATED TO ROCK ISLAND ARSENAL PERSONNEL. COMPUTER PROCEDURES FOR DETERMINING ECONOMIC DRILLING AND MILLING OPERATIONS WERE DESIGNED AND DEVELOPED.	135.0	63.2	29.4	SEP 83	APR 84
6 78 7710	INJECTION MOLDING OF RUBBER OBTURATOR PADS THE FINAL REPORT HAS BEEN TYPED FOR PUBLICATION.	77.0		77.0	JUL 79	JUL 83
6 81 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) A VARIANT PROCESS PLANNING SYSTEM WAS DEVELOPED. IMPLEMENTATION IS SCHEDULED. HARDWARE TO SUPPORT SOLID MODELING WAS INSTALLED. A GT SCHEDULING SYSTEM WAS DEVELOPED. SEE MMT PROJECT 6 83 7724.	180.0	157.5	18.4	JUN 83	MAR 84
6 83 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) THE OBJECTIVE OF THIS PROJECT IS TO DEVELOP AN AUTOMATED PROCESS PLANNING SYSTEM. A MICROPROCESSOR TO SUPPORT THIS PROGRAM HAS BEEN ORDERED. A LITERATURE SEARCH WAS CONDUCTED.	250.0			SEP 85	SEP 85
6 80 7730	MANUFACTURE OF SPLIT RING BREECH SEALS DESIGN CHANGES FOR AUTOMATED ABRASIVE SAW HAVE BEEN SENT TO PROCUREMENT. TEST PIECES FOR KINKING MACHINE TESTS ARE BEING MANUFACTURED. POLISHING FIXTURE HAS BEEN MANUFACTURED.	363.0	0.9	226.0	DEC 82	SEP 84

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		(\$000)	(\$000)	(\$000)		
6 82 7730	MANUFACTURE OF SPLIT RING BREECH SEALS SPECIFICATION CHANGES HAVE BEEN PROPOSED TO SIMPLIFY PRESENTLY DEFINED EQUIPMENT. TEST PIECE FOR KINKING EQUIPMENT TESTS ARE BEING MANUFACTURED. INTERCHANGEABLE JAWS AND GUAL PURPOSE TABLE ARE BEING DESIGNED.	108.0		11.3	SEP 84	SEP 84
6 77 7753	NOISE SUPPRESSOR F/POWDER TYPE RECOIL MECHANISM TEST MACHINE THE NOISE SUPPRESSOR IS BEING MODIFIED. THESE MODIFICATIONS INCLUDE EXTENSIVE REPAIR WELDING. A LARGE INSTRUMENTATION PORT IS BEING ADDED. THE FINAL REPORT IS BEING PREPARED.	385.0	301.7	52.7	FEB 80	DEC 83
6 79 7802	ESTABLISH MACHINE TOOL PERFORMANCE SPECIFICATIONS FINAL TECHNICAL REPORT RETURNED TO CONTRACTOR FOR CORRECTION.	287.6	267.6	16.8	JUN 81	NOV 83
6 81 7807	PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM) POLISHING TIME REDUCED FROM 15 TO 2 MIN. BREADBOARDING OF PROCESS CONTROL INTERFEROMETER + ASSEMBLY/TESTING OF AUTO LENS BLOCKING DEVICE IN PROGRESS.	126.0	109.0	13.0	JUL 83	JUL 83
6 81 7916	APPLICATION OF LOW COST MANDREL MATERIALS THE SUB-SIZED MARAGE 350 MANDRELS COATED WITH TITANIUM OXIDE EXHIBITED EXCELLENT ADHERENCE AND HARDNESS. A 105 MM MANDREL IS BEING DETONATION SPRAY COATED WITH TUNGSTEN CARBIDE FOR FORGING TRIALS.	168.0	1.4	151.2	SEP 83	SEP 83
6 81 7925	BURE EVACUATOR BORING THE SPECIAL BURE EVACUATOR MACHINE IS NEARLY COMPLETED. FOUNDATION DRAWINGS HAVE BEEN FORWARDED TO THE PLANT LAYOUT SECTION FOR MACHINE SITE PREPARATION.	248.0	176.2	60.6	SEP 83	SEP 83
6 82 7926	HUT ISOSTATIC PRESSING (HIP) OF LARGE ORDNANCE COMPONENTS TWO HIPPED LOW ALLOY STEEL BILLETS RECEIVED. MATERIAL CURRENTLY BEING ANALYZED FOR CHEMICAL, METALLURGICAL AND MECHANICAL PROPERTIES. ONE PREFORM FINISHED MACHINED INTO 8 INCH M201 BREECH BLOCK.	295.0	26.0	83.0	SEP 84	SEP 84
6 81 7927	GENERATION OF BASE MACHINING SURFACES THE CONTRACTOR, COMPUTER TECHNOLOGY CORP., IS CURRENTLY INVOLVED IN FINAL ASSEMBLY + TESTING OF THE EQUIPT. THE MECHANICAL SYSTEMS ARE 90 PCT COMP. WITH FOUR OF THE SIX AXES FUNCTIONING. THE COMPUTER CONSOLE + SOFTWARE ARE COMPLETE.	422.0	398.0	16.0	SEP 84	DEC 83
6 81 7928	ROBOTIZED BENCHING OPERATIONS (CAM) WORK IS PROGRESSING IN DEVELOPMENT OF ROBOT PROGRAMMING LANGUAGE WITH COMPLETION IN SITE. ALSO THE DATA FOR THE DATA BASE FOR THE 8 IN BREECHING COORDINATES IS ALSO NEARING COMPLETION.	287.0	251.2	34.7	SEP 83	SEP 83

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6 82 7940	SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS ASSEMBLY OF THE FACILITY F/ PLATING ELECTRODEPOSITED NICKEL PHOSPHORUS ALLOY WAS COMPLETED. THE COMPOSITION AND OPERATING CONDITION OF THE DEVELOPED BATH HAS BEEN IDENTIFIED. LFH-1 WEAR TEST SPECIMENS WERE COATED F/ COMPARISON TO ELECTROLESS NICKEL.	175.0	90.0	45.1	NOV 83	MAY 84
6 81 794d	ESTABLISH CUTTING FLUID CONTROL SYSTEM FINAL TECHNICAL REPORT IS BEING REPRODUCED.	164.0	83.6	81.0	JUL 82	SEP 83
6 80 7949	APPLICATION OF GROUP TECHNOLOGY TO RIA MFG (CAM) PART FAMILIES FOR MACHINED PARTS HAVE BEEN IDENTIFIED. THREE OF THE PART FAMILIES ARE CURRENTLY BEING ANALYZED. IT APPEARS THE RESULTS OF THIS PROGRAM WILL BE INTEGRATED INTO PROCESS PLANNING FUNCTIONS.	155.0	98.6	42.1	MAY 82	DEC 83
6 80 7963	GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES GT SCHEDULING PROGRAM CONVERSION IS COMPLETE. THE PROGRAM IS NOW AVAILABLE IN FORTRAN. A COPY OF THE ICAM-GTSS SOFTWARE WAS REQUESTED. THIS SOFTWARE WILL BE INTEGRATED WITH THE PRESENT SYSTEM.	348.0	21.8	269.9	DEC 81	DEC 83
6 82 7966	MANUFACTURE OF TRITIUM POWERED RADIOLUMINOUS LAMPS TESTING AND ANALYSIS OF TRITIUM LAMP SAMPLES HAS BEEN COMPLETED. RESULTS CONFIRM ADEQUACY OF CURRENT PRODUCTION METHODS. PROCESS CONTROLS HAVE BEEN IDENTIFIED. FINAL REPORTS ARE IN PROCESS.	253.0		165.0	JUN 83	JUN 83
6 81 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY PHYSICAL WORK ON ULTRASONICALLY ASSISTED EJECTOR DRILLING COMPLETED. TESTING FOR ULTRASONIC GUN DRILLING HAS BEGUN. TESTING RELATED TO SINGLE POINT CHAMBER CONTOURING HAS BEEN INCONCLUSIVE DUE TO TOOLING PROBLEMS.	436.0	265.0	154.0	OCT 82	MAY 83
6 82 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY AN UPDATED QUOTE FROM GFM OF AMERICA IS BEING OBTAINED AND A SUPPLY OF H-11 MATERIAL WITH A HOMOGENEOUS CARBIDE DISTRIBUTION IS ON ORDER FOR THE COLD FORGING OF CHAMBERS TASK.	620.0	316.0	108.0	OCT 83	JUN 84
6 83 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY ***** DELINQUENT STATUS REPORT *****					
6 80 8017	POLLUTION ABATEMENT PROGRAM THE BATCH TYPE RECYCLING SYSTEM FOR CUTTING FLUIDS HAS BEEN IN FULL OPERATION. ABOUT 120 MACHINES HAVE BEEN CLEANED UP AND PLACED IN THE PROGRAM FOR PERIODIC PUMP OUT AND RECYCLE. THESE MACHINES HAVE ALL USED ONE PARTICULAR FLUID.	86.0		86.0	JAN 81	DEC 83

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6 80 8024	HIGH SPEED ABRASIVE BELT GRINDING COORDINATION OF EFFORTS REQUIRED FOR FLOOR SPACE/SITE PREPARATION CONTINUED DURING THIS REPORTING PERIOD.	324.0	297.5	27.1	SEP 82	DEC 83
6 82 8024	HIGH SPEED ABRASIVE BELT GRINDING EQUIPMENT HAS PASSED PRELIMINARY ACCEPTANCE TESTING AT CONTRACTORS PLANT AND ACTION HAS BEEN INITIATED TO HAVE EQUIPMENT SHIPPED TO MVA FOR INSTALLATION AND FINAL ACCEPTANCE TESTING.	142.0		58.6	SEP 84	SEP 84
6 82 8030	MANUFACTURING GUIDE FOR ELASTOMERIC SEALS THREE M140 GUN MOUNT SEALS FABRICATED FROM A STANDARD MATERIAL USED IN THE M178 MOUNT WERE TESTED SUCCESSFULLY. STUDIES OF CURRENT REQUIREMENTS FOR SEAL MATERIALS SHUN THEM TO BE EXCESSIVE AND RESULTING IN HIGH COST AND POOR SHELF LIFE.	123.0		35.0	MAY 83	DEC 83
6 80 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS AN ECP TO REPLACE ONE PIECE M174 NODULAR IRON PISTONS WITH AL-BRONZE COATED STEEL PISTONS HAS BEEN ACCEPTED. WRITING OF THE FINAL REPORT IS IN PROGRESS.	180.0		163.3	MAR 81	DEC 83
6 81 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS M1 RECOIL PISTONS AND FOLLOWER WERE CLAD WITH AL-BRONZE USING THE CHAM PROCESS. TWO SETS ARE BEING TESTED FOR 1000 RDS UN THE HYDRAULIC GYMNASIATOR FOR PERFORMANCE EVALUATION.	200.0	20.8	122.0	JUN 82	MAR 83
6 80 8036	WEAPON AIMING SYSTEM FOR THE 6-DOF SIMULATOR THE SYSTEM HAS BEEN TESTED UNDER FIRING CONDITIONS. SINCE THE RESOLUTION OF THE CAMERA AT 1000 INCHES WAS LESS THAN 0.25 MRAD AND THE FIELD OF VIEW (FOV) WAS ONLY 14 MKAD THE FOV WAS DOUBLED. THIS HAS ALLOWED EASIER TARGET TRACKING.	126.0	18.8	107.1	SEP 81	SEP 83
6 80 8047	PASS THRU STEADY RESTS FOR TUBE TURNING CONTRACTOR FINANCIAL PROBLEMS HAVE CAUSED ALL WORK TO HALT. THIS SITUATION IS PRESENTLY BEING EVALUATED.	369.0	262.1	83.0	JUL 83	SEP 83
6 82 8050	RECYCLING SPENT GUN TUBES BY ESR MELTING A JOB ORDER HAS BEEN ISSUED TO ROTARY FURGE THREE ESR INGOTS TO 105 M68 PREFORM SIZED SOLID FORGINGS. THE PREFORMS WILL BE TREPANED PRIOR TO FORGING INTO 105MM M68 TUBES.	204.0	1.0	45.6	MAY 84	SEP 84
6 80 8051	APPLICATION AND CONTROL OF MACHINE TOOLS (CAM) ALL PHYSICAL WORK COMPLETED. COMPUTER PROGRAMS FOR 10 EXISTING MACHINE TOOLS WERE REVIEWED AND DEMONSTRATED. WRITING OF FINAL TECH REPORT HAS BEGUN.	208.5	150.6	44.1	AUG 81	NOV 83

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6 81 8054	OPTICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS E-BEAM LITHOGRAPHY WAS USED TO GENERATE A CHROME MASK ON WHITE CROWN GLASS SUBSTRATE. A 6 PATTERN SET OF UNIFORM LINES, 1.3 MICRON WIDE AND .5 MICRON DEEP, WAS ETCHED AND CHROME WAS REMOVED. IT WAS SENT TO NBS FOR EVALUATION.	266.0	146.1	46.2	AUG 84	AUG 84
6 80 8057	DUAL RIFLING BROACH REMOVAL SYSTEM BORING BAR GROOVES WERE FOUND TO BE OUT OF TOLERANCE AND ARE BEING REMACHINED.	215.0	8.1	156.1	SEP 82	SEP 84
6 82 8062	RAPID INTERNAL THREADING THREE OF FIVE TECHNICAL PROPOSALS RECEIVED WERE FOUND TO BE ACCEPTABLE. ONE REQUIRES FURTHER EVALUATION AND A REQUEST FOR ADDITIONAL TECHNICAL DETAILS IS BEING PROCESSED THROUGH THE PURCHASING DEPT.	366.0		17.5	JUL 84	AUG 84
6 82 8102	POWDER METALLURGY FORGINGS WEAPONS COMPONENTS A SOLE SOURCE CONTRACT TO ESTABLISH PRODUCTION PARAMETERS FOR MANUFACTURING SPLIT RING COMPONENTS HAS BEEN NEGOTIATED WITH BATTELLE-COLUMBUS.	110.0		24.0	SEP 84	SEP 84
6 83 8102	APPL OF POWDER METALLURGY FORGING TO WEAPON COMPONENTS FUNDING RECENTLY RECEIVED. VARIOUS NON-DESTRUCTIVE TESTING TECHNIQUES ARE BEING EVALUATED FOR APPLICABILITY TO THE NET SHAPE SPLIT RINGS.	142.0		1.0	SEP 85	SEP 85
6 82 8103	HIGH VELOCITY MACHINING PROJECT PARAMETERS ARE BEING FINALIZED UTILIZING RESULTS OF ADVANCED MACHINING RESEARCH PROGRAM FUNDED BY DARPA.	37.0		35.6	SEP 83	SEP 83
6 83 8103	HIGH VELOCITY MACHINING EQUIPMENT AT MECHANICSBURG, PA HAS BEEN IDENTIFIED AS BEING POTENTIALLY APPLICABLE TO THIS PROGRAM. INSTRUMENTATION IS AVAILABLE TO PERFORM FORCE MEASUREMENTS AFTER THE EQUIPMENT HAS BEEN INSTALLED.	285.0		3.0	SEP 85	SEP 85
6 91 8105	ESTABLISH ROUGH THREAD BLANKS, 8 IN M201 BUSHING EQUIPMENT SELECTED FOR PROJECT HAS BEEN MODIFIED AND REPAIRED AT CONTRACTORS PLANT. DESIGN DRAWINGS FOR SLOTTING HEAD AND FIXTURING HAVE BEEN COMPLETED AND ARE BEING REVIEWED. TEST PARTS HAVE BEEN MANUFACTURED FOR TESTS AT CONTRACTOR AND MVA.	292.0	194.9	18.1	SEP 83	DEC 84
6 81 3106	LARGE CALIBER POWDER CHAMBER BORING PRELIMINARY ACCEPTANCE INSPECTION HAS BEEN SUCCESSFULLY COMPLETED. THE ENTIRE CONTRACT PACKAGE HAS BEEN DELIVERED TO MVA AND THE EQUIPMENT IS PRESENTLY BEING INSTALLED.	156.2	100.0	46.0	JUN 83	SEP 83

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PROJ NO.	TITLE + STATUS	AUTHO- RIZED (\$000)	CONTRACT VALUES (\$000)	EXPENDED LABOR AND MATERIAL (\$000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8106	LARGE CALIBER POWDER CHAMBER BORING INITIAL TESTING REVEALED THAT A MEANS TO STABILIZE THE BORING BAR WAS REQUIRED. A SUPPORT BUSHING SYS WAS TESTED SUCCESSFULLY (TO 24 IN DEPTH OF CUT). AN IDLER BUSHING CONCEPT IS BEING INVESTIGATED WHICH WILL ALLOW SUPPORT AT ALL REQD DEPTHS OF CUT.	72.0	52.8	17.0	SEP 84	SEP 85
6 80 8107	CREEP FEED CRUSH FORM GRINDING PRELIMINARY TESTING HAS BEEN SUCCESSFULLY COMPLETED. FINAL ACCEPTANCE TESTING HAS BEEN DELAYED BECAUSE SITE PREPARATION AT MVA HAS NOT BEEN COMPLETED.	579.7	553.4	27.3	MAY 83	SEP 83
6 81 8107	CREEP FEED CRUSH FORM GRINDING FINAL ACCEPTANCE TESTING IS BEING DELAYED PENDING COMPLETION OF SITE PREPARATIONS.	73.0		37.5	JUL 84	SEP 84
6 82 8108	PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS SAMPLE OPTICAL BONDS WERE PREPARED. PRE AND POST HEAT CYCLE TESTING USING AN INTERFEROMETER AND AN AUTOCOLLIMATOR REVEALED SIGNIFICANT DISTORTION AND MISALIGNMENT DUE TO ADHESIVE CREEP. BETTER BONDING TECHNIQUE DEVELOPMENT MAY BE INCLUDED IN PROJECT.	205.0		107.5	DEC 83	FEB 84
6 82 9113	ESTABLISHMENT OF IUN PLATING PROCESS FOR ARMAMENT PARTS IVD ALUMINUM PROCESS HAS BEEN ESTABLISHED. PLANT SET-UP AND OPERATIONAL PROCEDURES WERE ESTABLISHED. A FINAL COATING EVALUATION AND PROCESS PARAMETERS OPTIMIZATION WERE ACCOMPLISHED.	142.0		75.0	SEP 83	SEP 83
6 83 8120	ADAPTIVE CONTROL TECHNOLOGY (CAM) A DETAILED SPECIFICATION TO RETROFIT A CYLINDRICAL GRINDER IS BEING PREPARED. IF POSSIBLE AN EXISTING MACHINE TOOL WILL BE USED.	495.0		4.9	SEP 85	SEP 85
6 81 8135	IN-PROCESS CONTROL OF MACHINING A MILLING MACHINE IS BEING PROCURED AFTER A SUITABLE MACHINE COULD NOT BE OBTAINED FROM DIPEC. THE NEW MACHINE WILL BE FURNISHED TO THE CONTRACTOR WHO WILL ASSEMBLE THE MACHINING SYSTEM. THE ESTIMATED COMPLETION DATE IS GOING TO SLIP.	906.0	647.3	30.0	OCT 82	JAN 84
6 82 8135	IN-PROCESS CONTROL OF MACHINING A CONTRACT WAS AWARDED FOR THIS PHASE II EFFORT CONTINGENT UPON THE RESULTS DEMONSTRATED DURING PHASE I. A TEST PLAN WAS DEVISED TO DETERMINE THE ADAPTABILITY OF THE BASIC CONTROL SYSTEM FOR MILLING TO CONTROL TURNING AND BORING OPERATIONS.	841.0	594.3	8.3	FEB 84	JAN 85
6 81 8136	IMPROVED IMPULSE PROGRAMMERS FOR HYDRAULIC SIMULATORS A COMPUTER MODEL WAS GENERATED TO AID IN EVALUATING OPTIONS. PRELIMINARY RECOMMENDATIONS FOR REDESIGN HAVE BEEN GENERATED. HIGHER PRIORITY WORK HAS PRECLUDED AN INTENSIVE EFFORT ON THIS PROJECT.	80.0		17.5	SEP 83	APR 84



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6 81 8151	PORTABLE ENGRAVING SYSTEM THE FIRST STEP OF A TWO-STEP PROPOSAL PROCUREMENT WAS CLOSED. ALL PROPOSALS WERE REVIEWED IN-HOUSE AND DISCUSSION WITH EACH VENDOR HELD WHERE CONCEPTS WERE DISCUSSED. THE LOW BIDDER, ESI IS CURRENTLY UNDERGOING A PRESURVEY.	84.0		54.1	DEC 82	SEP 83
6 82 8151	PORTABLE ENGRAVING SYSTEM FUNDS HAVE BEEN COMMITTED FOR SUBSEQUENT PURCHASE OF A PORTABLE GUN TUBE ENGRAVER. AT PRESENT, WATERLIET IS AWAITING CONTRACT AWARD.	171.0		10.8	JAN 84	SEP 84
6 81 8152	IMPROVED ANODE STRAIGHTNESS FOR CHROMIUM PLATING THE FULL SCALE ANODE HAS BEEN COMPLETED AND DELIVERED TO BNL. PREPARATIONS ARE BEING COMPLETED TO APPLY LEAD PLATING TO THE ANODE PRIOR TO ELECTRICAL AND PLATING TESTING.	280.0	99.0	145.9	AUG 73	SEP 84
6 81 8153	INCREASING GUN TUBE HEAT TREATMENT CAPACITY RETAINED HEAT TASK-THREE M68 GUN TUBES HAVE BEEN TAKEN DIRECTLY FROM FORGING AND GIVEN A MODIFIED HEAT TREAT IN THE SELAS HEAT TREAT SYSTEM. INDUCTION HEAT TASK-FEASIBILITY TESTS BY BOTH CONTRACTORS HAS BEEN COMPLETED.	325.0	202.0	95.5	MAY 83	JAN 84
6 81 8154	COMPUTER INTEGRATED MANUFACTURING (CIM),DNC THE OBJECTIVE OF THIS PROGRAM IS TO DEVELOP AND IMPLEMENT A PILOT DNC SYSTEM. A TWO STEP PROCUREMENT IS BEING USED. THE TECHNICAL EVALUATION OF PROPOSALS IS COMPLETE. STEP TWO, PRICING AND CONTRACT AWARD, COMPLETED. SEE MMT PROJECT 6 83 8154.	442.0		46.3	DEC 83	JUL 84
6 83 8154	COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNON SEE MMT PROJECT 6 81 8154 ON 30 JUNE 83. BIDS WERE RECEIVED AND A CONTRACT IS SCHEDULED FOR AWARD BEFORE OCT 30, 1983.	650.0			SEP 84	SEP 84
6 82 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS NO SIGNIFICANT EFFORT ACCOMPLISHED DURING THIS REPORT PERIOD. REFER TO PROJECT 6 81 8165.	258.0			OCT 83	SEP 84
6 81 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS PILOT LINE + METROLOGY EQUIP IS COMPLETE. PROTOTYPE GRIN BLANKS ARE IN FABRICATION. FINAL CHOICE OF MATERIALS + DESIGN IS UNDERWAY. M19 BINGOLARS IS THE END ITEM FOR DEMONSTRATION RETRUFIT WITH GRIN EYEPIECE IN PHASE THREE.	374.0	334.0	20.0	MAY 83	JAN 84
6 82 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) PRODUCTION HISTORY OF CASTING HEATS AT ROCK ISLAND ARSENAL WAS REVIEWED TO DETERMINE PROBLEM METALS. ADVANTAGEOUS APPLICATIONS WERE IDENTIFIED FOR STEEL AND IRON ALLOYS, SEVERAL ALUMINUM ALLOYS, AND SEVERAL BRONZE ALLOYS.	250.0		46.6	MAR 84	MAR 84

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6 83 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) NO SIGNIFICANT ACCOMPLISHMENTS ACHIEVED DURING THIS REPORTING PERIOD. REFER TO PRIOR YEAR PROJECT 6 82 8231.	136.0			FEB 85	FEB 85
6 82 8238	BORING BREECH RING LUGS TOOLING SPECIFICATIONS AND FIXTURE DESIGN HAVE BEEN COMPLETED. FIXTURE FABRICATION HAS BEGUN. ELECTRICAL DESIGN SCHEMATICS HAVE BEEN DRAWN AND A HIGH PRESSURE, HIGH VOLUME COOLANT SYS SPEC IS BEING PREPARED.	203.0		53.0	AUG 84	AUG 84
6 82 8241	COMPUTER DIAGNOSTICS AND CONTROL FOR BORE GUIDANCE ALL SEQUENTIAL OPERATIONS OF THE GUIDED BORE LATHE HAVE BEEN EVALUATED. THE PERFORMANCE AND TIMING OF THESE OPERATIONS HAVE BEEN REDUCED TO BOOLEAN LOGIC EQUATIONS. AN ENCODER TO KEEP TRACK OF TOOL POSITION HAS BEEN SELECTED.	308.0		16.2	JUN 85	JUN 85
6 82 8242	DUAL PRESS STRAIGHTENING OF GUN TUBES MANUFACTURED TWO POINT LOADING DEVICE FOR HYDRAULIC PRESS AND STRAIGHTENED A 105MM M68 TUBE. RECEIVED A SCREEN MOTION SLIDE ASSEMBLY TO MEASURE DEFLECTION VERSUS DISTANCE FROM THE END OF BEND SPECIMENS.	120.0	1.7	21.8	NOV 83	NOV 83
6 82 8243	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS DEFINITIONS OF INPUT/OUTPUT REQUIREMENTS FOR THE NEW CHROME PLATING FACILITY HAVE BEEN COMPLETED. DEFINITION OF NORMAL COMPONENT AND ALARM/ANNUNCIATOR CONDITIONS FOR EACH STATE OF THE 120MM/8 INCH PRODUCTION PLATING FACILITY IS COMPLETED.	301.0	51.2	220.4	MAY 84	SEP 84
6 83 8243	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS A DIAGNOSTICS SIMULATOR HAS BEEN DEFINED AND ACQUISITION OF COMPONENTS INITIATED.	260.0		15.4	SEP 84	SEP 84
6 82 9244	OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES AN ANALYSIS IS BEING CONDUCTED OF SEVERAL PARAMETERS TO DETERMINE THEIR EFFECT ON MECHANICAL PROPERTIES OF TUBES. DIFFERENCES BETWEEN TWO TUBE HEATS IS BEING ANALYZED BY CHECKING CHEMISTRY, HARDENABILITY, MECHANICAL PROPERTIES, AND INCLUSIONS.	290.0		42.5	MAR 84	SEP 84
6 82 9245	APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE THE PURCHASE OF A LARGER RECTIFIER HAS BEEN APPROVED. EXPERIMENTS TO DEPOSIT LC CHROMIUM WITH A LIMITED CAPACITY OF AMPERAGE WERE CONDUCTED ON M68 TUBES TO OBTAIN PLATING PARAMETERS.	241.0		154.8	JUN 84	SEP 84
6 83 8245	APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE THE PURCHASE OF A LARGER RECTIFIER HAS BEEN APPROVED. EXPERIMENTS TO DEPOSIT LC CHROMIUM WITH A LIMITED CAPACITY OF AMPERAGE WERE CONDUCTED ON M68 TUBES TO OBTAIN PLATING PARAMETERS.	195.0		0.8	SEP 84	SEP 84

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6 82 8246	GAS CHECK SEAT FINISHING TECHNICAL PROPOSALS WERE EVALUATED AND PROCUREMENT ACTION HAS BEEN INITIATED.	151.0		58.4	JUN 84	JUN 84
6 82 8248	APPLICATION OF HIGH-RATE CUTTING TOOLS IMPREGNATED FIBER WHEELS WERE TESTED FOR FINISHING RECOIL CYLINDERS. SURFACE FINISH PRODUCED WAS UNACCEPTABLE FOR CHROME PLATING. TESTING TITANIUM-OXIDE COATED DRILLS AND END MILLS WERE STARTED. PLANS WERE BEGUN FOR TESTING REGROUND COATED TOOLS.	102.0		31.6	JUN 83	MAY 84
6 82 8251	IMPROVED MELTING PRACTICES INSTRUMENTS WERE INSTALLED TO MONITOR THE MELT BATH. PROCESS PARAMETERS ARE BEING DETERMINED.	193.0	7.2	102.0	JUN 83	NOV 83
6 83 8251	IMPROVED MELTING PRACTICES SCOPE OF WORK PREPARED. AWAITING CONTRACT PROPOSALS.	164.0			FEB 85	FEB 85
6 82 8252	INDUCTION HEATING OF A VARYING DIAMETER PREFORM A SPECIFICATION IS BEING RESUBMITTED WITHOUT A REQUIREMENT FOR ACCEPTANCE TESTING, ON A SOLE SOURCE BASIS, TO THE ORIGINAL MANUFACTURER.	241.0	12.9	50.0	MAR 84	MAR 85
6 82 8253	MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS SPECS FOR MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS SYSTEM HAVE BEEN REVISED AND PROCUREMENT ACTION IS UNDERWAY.	190.0		54.5	APR 84	SEP 84
6 82 8254	AUTOMATED SURFACE COATING OF CANNON - PAINTING THE TECHNICAL WORKING GROUP VISITED M.W. CUSTEN CLAD, INC., TO GAIN INSIGHT INTO PROBLEM AREAS. AN ON-SITE MEETING WAS HELD WITH REPRESENTATIVES OF INDUSTRIAL SPRAY BOOTH SYSTEMS. A 105MM M68 GUN TUBE IS BEING PREPARED AS A SAMPLE TEST FOR PAINTING.	80.0		3.7	JAN 84	APR 84
6 82 8259	IMPROVED MANUFACTURING PROCESS FOR FIRE CONTROL REGISTERS DURING THIS REPORTING PERIOD THE EQUIPMENT DESIGN + THE EQUIPMENT MANUFACTURE WERE INITIATED. THE DESIGN PHASE HAS BEEN COMP. FOR ALL THE MECHANICAL ELEMENTS OF THE EQUIPMENT.	261.0		79.7	SEP 84	SEP 85
6 82 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES OPTICAL WAVEGUIDE CIRCUIT SPECIFICATIONS ARE DEFINED. PROPOSALS IN RESPONSE TO RFP WERE EVALUATED AND THE CONTRACT WAS AWARDED TO WESTINGHOUSE ELECTRIC CORP.	480.0	306.0	72.0	JAN 83	APR 85
6 82 8263	PRODUCTION/IN-PROCESS INSPECTION OF LASER RANGEFINDERS CONTRACT EFFORTS HAVE BEEN PROGRESSING SATISFACTORILY WITH PRIMARY EMPHASIS ON THE M60A3 LASERFINDER. ALL REQ HAVE BEEN DEFINED. HUD OF CONTRACT WILL ALLOW DYNAMIC RECEIVER SENSITIVITY MEASUREMENTS TO BE MADE.	355.0	100.0	150.0	AUG 83	SEP 84

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6 82 8267	STRESS PEENING OF HELICAL COMPRESSION SPRINGS A CONTRACT WAS AWARDED TO TELEDYNE ENGINEERING SERVICES. FATIGUE TESTING OF TWO SMALLER WIRE SIZE SPRINGS IN THE UNPEENED CONDITION HAS BEEN COMPLETED. THESE SIZE SPRINGS ARE IN THE PROCESS OF BEING SHOT PEENED BY A SUBCONTRACTOR.	139.5	80.5	37.6	AUG 83	JUL 84
6 81 8505	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT ACCOMPLISHMENTS ACHIEVED DURING THIS REPORTING PERIOD.	235.0		34.5	JUL 82	UCT 84
6 82 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT ACCOMPLISHMENTS ACHIEVED DURING THIS REPORTING PERIOD.	204.0			SEP 86	UCT 84
6 83 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT ACCOMPLISHMENTS ACHIEVED DURING THIS REPORTING PERIOD.	75.0		1.0	OCT 84	OCT 84
6 82 8306	ON-LINE PRODUCTION INFORMATION SYSTEM (CAM) NO SIGNIFICANT ACCOMPLISHMENTS ACHIEVED DURING THIS REPORTING PERIOD.	70.0		2.1	UCT 84	AUG 84
6 83 8306	ON-LINE PRODUCTION INFORMATION SYSTEM - RIA (CAM) NO SIGNIFICANT ACCOMPLISHMENTS ACHIEVED DURING THIS REPORTING PERIOD. REFER TO PRIOR YEAR PROJECT 6 82 8306.	200.0			SEP 84	SEP 84
6 83 8324	PROCESS CONTROLS FOR POWDERED METAL WEAPON COMPONENTS PROCUREMENT PACKAGE DELIVERED TO ARDC PROCUREMENT IN MAY 1983.	160.0		20.0	SEP 84	SEP 84
6 82 8341	HOLLOW CYLINDER CUT OFF MACHINE TECHNICAL PROPOSALS HAVE BEEN EVALUATED. PROCUREMENT ACTION HAS BEEN INITIATED.	655.0		4.0	SEP 84	SEP 84
6 82 8346	DEBURRING OF BORE EVACUATOR HOLES TEST SPECIMENS HAVE BEEN FABRICATED. DEBURRING EQUIP REQUIRES ONLY MINOR MODIFICATION BEFORE TESTING IS TO BEGIN. A LEAK TEST HAS BEEN COMPLETED SUCCESSFULLY.	224.0		123.6	NOV 84	SEP 84
6 83 8351	IMP MANUFACTURE OF QUADRANT FLATS AND MUZZLE BRAKE KEYWAY ENGINEERING EVALUATION HAS BEGUN.	88.0		9.4	SEP 84	SEP 84
6 83 8352	SKIVING (METAL SHAVING) GUN TUBE BORES PROJECT MILESTONES HAVE BEEN ESTABLISHED AND CONTACTS HAVE BEEN MADE WITH THREE FIRMS INVOLVED WITH SKIVING TECHNOLOGY AND ITS APPLICATION.	120.0		7.1	SEP 84	SEP 84

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6 83 8354	CUTTING OF HOT ROTARY FORGE TUBES SPECIFICATION HAS BEEN PREPARED FOR PURCHASE OF ABRASIVE CUTOFF SAW.	414.0		3.2	SEP 85	SEP 85
6 82 8370	AUTOMATIC INSP AND PROC CONTROL OF WEAPONS PARTS MFG TWO COMPETING EFFORTS HAVE BEEN AWARDED TO DEVELOP AN AUTOMATED GUN BARREL STRAIGHTENING METHOD. BOTH OF THESE EFFORTS HAVE BEEN COMPLETED. COMPARATIVE EVAL OF THESE EFFORTS ARE IN-PROCESS.	193.0	58.0	87.5	SEP 83	SEP 83
6 82 8416	FLEXIBLE MACHINING SYSTEM - RIA (CAM) AN INITIAL SELECTION OF 61 FMS COMPATIBLE PARTS WAS COMPLETED. PROCESS PLANS FOR THESE PARTS ARE BEING DEVELOPED. FMS CONFIGURATIONS ARE BEING DEVELOPED.	138.0	100.0	2.0	SEP 83	NOV 83
6 82 8448	BRAIDED PROCESS FOR BORE EVACUATOR A PROCUREMENT PACKAGE FOR THE PURCHASE OF A BRAIDING MACHINE WAS COMPLETED, AND A REQUEST FOR PROPOSALS MAILED TO 15 PROSPECTIVE BIDDERS. ONE BID WAS RECEIVED, AND IS UNDERGOING EVALUATION.	260.0		76.2	SEP 84	SEP 84

## APPENDICES

## APPENDIX I: COMMAND IDENTIFICATION

# **APPENDIX: ARMY ACTION COMMAND/ACTIVITY IDENTIFICATION**

<u>Action Command Identifier</u>	<u>Acronym</u>	<u>Command</u>
Management Engineering Training Activity	AMETA	D
Mobility R&D Command	MERADCOM	E
Depot Systems Command	DESCOM	G
Electronics R&D Command	ERADCOM	H
Army Materials and Mechanics Research Center	AMMRC	M
Natick R&D Laboratories	NLABS	Q
Test & Evaluation Command	TECOM	0
Aviation R&D Command	AVRADCOM	1
Communications & Electronics Command	CECOM	2
Missile Command	MICOM	3
Tank-Automotive Command	TACOM	4
Armament, Munitions, & Chemical Command (Munitions)	AMCCOM (Ammo)	5
Armament, Munitions, & Chemical Command (Weapons)	AMCCOM (Wpns)	6
Troop Support & Aviation Materiel Readiness Command	TSARCOM	7

NOTE: Abbreviation - R&D - Research and Development



## APPENDIX II: PROJECT SLIPPAGE STUDY

## PROJECT SLIPPAGE STUDY

The purpose of this study is to monitor trends in the timeliness of the MMT Project Execution. Figure 1 is a slippage profile for each command and for the program as a whole. The column with the fewest number of projects is the "No Data" column. The percentage in this column is derived from the few FY83 projects that were recently funded and therefore required no status reports. The larger number in the "0 Mo" column is a reflection of the new FY83 program for which first status reports have been received. When combined with the figures from the "0 Mo" column, you have that part of the program for which no slippage problems exist. The remaining five columns indicate slippage for projects FY82 and prior that have not yet been completed. The number of months that a project has slipped is calculated by determining the difference between the projected completion date cited on the first status report and the revised completion date cited on the current status report. The largest variation is the 7-12 mos. column with a 5 percentage point increase in 1st CY83. In the past the figures in the slippage columns have remained very consistent from period to period. Thus the 5 percentage point increase in the "7-12 Mo" column at the expense of the decrease in the combined "No Data - 0 Mo" columns must be considered significant. The last three columns (13-25+ months) vary no more than +2 percentage points from reporting period to reporting period.

There are two problems that affect accurate project slippage reporting. One problem is delinquent status reports. During the current reporting period, there were 26 delinquent reports. This delinquency results in a larger number of active projects because final status reports are not submitted for those delinquent projects that have in actuality been closed out. These "completed" projects then increase in months of slippage which could account for a larger than actual percentage of projects in the "25+ Mo" columns. With decreased delinquency over the past 3 periods (18% to 5%), the current slippage profile must be considered more accurate than that to which it is being compared. A further decrease in delinquency of project status reports will improve the accuracy of the project slippage profile.

Another problem that affects accurate project slippage reporting is the basis on which final status reports are submitted. Some organizations await financial close-out before submitting final status reports. By doing this, several months might be added to the apparent duration of the project. The general policy has been that final status reports should be submitted when the technical work has been physically completed. If outstanding financial action does not hinder project implementation, then the time required for financial close-out is not meant to be added to an indicator which measures engineering achievement. Continued emphasis on using a consistent basis for project close-out, namely technical completion, will provide a more accurate accounting of the technical life of MMT projects.

# PROJECT SLIPPAGE STUDY

		PROJECT SLIPPAGE DISTRIBUTION (PERCENT)						
COMMAND	NO. ACTIVE PROJECTS	NO DATA	0 MO	1-6 MO	7-12 MO	13-18 MO	19-24 MO	25+ MO
AMETA	7		57	14				29
MERADCOM	9		11	11		22	33	22
DESCOM	11	27	45			9	9	9
ERADCOM	42	7	29	10	7	14	7	26
AMMRC	5	20	40	20			20	
NLABS	0							
TECOM	3		100					
AVRADCOM	42	7	26	12	12	17	14	12
CECOM	11		18	9	9	27	27	9
MICOM	33	9	52	6	9	6	9	9
TACOM	60	13	35	15	13	3	8	12
AMCCOM (AMMO)	129	6	30	12	13	9	10	19
AMCCOM (WPNS)	98	1	39	15	20	5	5	14
TSARCOM	2		100					
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SUMMARY (DARCOM WIDE)	452	7	35	12	13	9	10	16
1ST CY82 SUMMARY	555	9	38	10	8	11	8	15

\*FIGURES REFLECT DATA ON THE ACTIVE PROGRAM AS OF 7 NOV 83.

FIGURE 1 - SLIPPAGE PROFILE

### APPENDIX III: USER'S GUIDE

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5 83 4563 08	NON-DESTRUCTIVE TESTING OF A PREFORMED SHAPE A DOW HAS BEEN PREPARED AND SENT TO THE DOE ROCKEY FLATS FACILITY FOR INITIATION OF WORK IN 1ST QTR 1984.	227.5		3.4	JUN 85	JUN 85
5 83 4563 11	PROCESS IMPROVE FOR DU PENETRATORS-MG F2 LINERS SCOPE OF WORK COMPLETED AND PROCUREMENT PACKAGES FORWARDED TO PROCUREMENT WITH ANTICIPATED CONTRACT AWARD DATE OF 1 OCT 1984.	331.5		5.3	SEP 85	SEP 85
5 83 4563 16	QUENCH PARAMETERS FOR HEAT TREATING DU A SCOPE OF WORK HAS BEEN COMPLETED AND A PROCUREMENT PACKAGE ASSEMBLED AND FORWARDED TO PROCUREMENT FOR CONTRACT AWARD BY 1 OCT 83.	427.5		8.5	JUN 85	JUN 85
5 83 4605	PROPELLANT BED DEPTH CONTROL IN CASBL AIR DRY FUNDS WERE RECEIVED AND OBLIGATED TO RADFORD AAP. TWO VENDORS WERE CONTACTED TO DISCUSS TYPE OF INSTRUMENTATION AVAILABLE TO DETERMINE PROPELLANT DEPTH.	579.0	461.0	10.6	JUL 84	JUL 84
5 82 6599	ELECTRO-OPTICAL INSPECTION OF ARTILLERY PROJ OPT CAVITY ALL DEFECT DETECTING ELECTRONICS CIRCUITRY HAS BEEN CHECKED FOR PROPER OPERATION AND ADJUSTMENTS OPTIMIZED. THE ONLY CIRCUIT STILL REQUIRING ADJUSTMENT IS ONE THAT INHIBITS FALSE REJECT SIGNALS.	75.0		30.0	SEP 83	SEP 83
5 79 6093	BALL PROPELLANT DETERRENT COATING-CAM RELATED DRAFT OF FINAL REPORT BEGUN DURING THE PERIOD. IT WILL BE FINISHED, REVIEWED AND EDITED BY THE END OF THE NEXT REPORTING PERIOD.	171.0	27.5	132.4	NOV 80	DEC 83
5 81 6716	DEV COMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPIS THIS PROGRAM IS COMPLETE. THE FOUR INDIVIDUAL METALFORMING MODELS WERE CONSOLIDATED INTO AN INTEGRATED SYSTEM. THE SYSTEM IS OPERATIONAL AT BATTLE AND IS BEING TRANSFERRED TO AHCCOM.	177.0	131.0	36.0	DEC 82	DEC 83
(1)	(2)	(3)	(6)	(7)	(8)	(9)

(4)

THIS FORM IS USED FOR SUMMARIZING  
THE MMT PROGRAM PROJECTS' STATUS.  
USER'S GUIDE BELOW EXPLAINS THE  
SIGNIFICANCE OF EACH COLUMN HEREIN.

**USER'S GUIDE**  
to  
**SUMMARY PROJECT STATUS REPORT**

**COLUMN 1. PROJECT NUMBER**

A project identified by the first and last four digits which corresponds to the project title for the life of its execution. However, for accounting and reporting purposes, a project is recognized by the totality of its seven-digit numeric or alphanumeric number. Example:

3 75 6241

Project identifying number, which corresponds to the project title and is designated by action command.

Fiscal year of funding - the only two digits that may vary according to funding frequency (7T for FY transition).

Action command (see list in Appendix I).

**COLUMN 2. Subtask identifier, if any.**

**COLUMN 3. PROJECT TITLE**

The title descriptive of project effort.

**COLUMN 4.** An abstract of project status taken from the Project Status report. Whenever possible, technical accomplishments during the reporting period were summarized.

**COLUMN 5. AUTHORIZED**

The total amount of funds authorized in dollars, to complete the project.

**COLUMN 6. CONTRACT VALUES**

The portion of authorized funds actually expended or obligated for work performed by private industry.

**COLUMN 7. EXPENDED LABOR AND MATERIAL**

The portion of authorized funds actually expended in-house, namely within the Government.

**COLUMN 8. ORIGINAL PROJECTED COMPLETION DATE**

Calendar date clearly given in, or the nearest calendar month and year as could be read from the Milestone Chart of, the very first Project Status Report, RCS DRCMT-301.

**COLUMN 9. PRESENT PROJECTED COMPLETION DATE**

Calendar date clearly given in, or the nearest calendar month and year as could be read from Milestone Chart of, the latest Project Status Report, RCS DRCMT-301.

**APPENDIX IV: ARMY MMT PROGRAM REPRESENTATIVES**

## ARMY MMT PROGRAM REPRESENTATIVES

### HQ, DARCOM

US Army Materiel Development and Readiness Command

ATTN: DRCMT, Mr. F. Michel

5001 Eisenhower Avenue

Alexandria, VA 22333

C: 202 274-8284/8298

AV: 284-8284/8298

### AVSCOM

US Army Aviation Systems Command

ATTN: DRSV-EGX, Mr. Dan Haugan

4300 Goodfellow Blvd.

St. Louis, MO 63120

C: 314 263-1625

AV: 693-1625

### CECOM

US Army Communications Electronics Command

ATTN: DRSEL-POD-P-G, Messr Feddeler/Esposito/Resnic

C: 201 535-4926

AV: 995-4926

ATTN: DRSEL-PC-I-IP, Mr. Leon Field

Fort Monmouth, NJ 07703

C: 201 532-4035

AV: 992-4995

### ERADCOM

US Army Electronics R&D Command

ATTN: DELET-R, Mr. Joseph Key

Fort Monmouth, NJ 07703

C: 201 544-4258

AV: 995-4258

ATTN: DRDEL-PO-SP, Mr. Harold Garson

2800 Powder Mill Road

Adelphi, MD 20983

C: 202 394-3812

AV: 290-3812

### MICOM

US Army Missile Command

ATTN: DRSMI-RST, Mr. Bobby Park

Redstone Arsenal, AL 35898

C: 205 876-2065

AV: 746-2065

### TACOM

US Army Tank-Automotive Command

ATTN: DRSTA-RCKM, Mr. Donald Cargo

Warren, MI 48090

C: 313 574-6065

AV: 786-6065

### AMCCOM

US Army Armament, Munitions & Chemical Command

ATTN: DRSMC-IRI-A (R), Ms. Geri Kopp (Ammo)

ATTN: DRSMC-IRW (R), Mr. Joseph Pohlman (Wpns)

Rock Island Arsenal

Rock Island, IL 61299

C: 309 794-3666/3166

AV: 793-3666/3166

ATTN: DRSMC-PMP-P (D), Mr. Donald J. Fischer

Dover, NJ 07801

C: 201 724-6092

AV: 880-6092

### TSARCOM

US Army Troop Support and Aviation Materiel Readiness Command

ATTN: DRSTS-PLB, Mr. Don G. Doll

4300 Goodfellow Blvd.

St. Louis, MO 63120

C: 314 263-2218

AV: 693-2218



BRDC

US Army Belvoir R&D Center  
ATTN: STRBD-HE, Mr. K. K. Harris  
Fort Belvoir, VA 22060

C: 703 664-5433  
AV: 354-5433

NRDC

US Army Natick R&D Center  
ATTN: DRDNA-EML, Mr. Frank Civilikas  
Natick, MA 01760

C: 617 651-4883/4882  
AV: 256-4883/4882

TECOM

US Army Test & Evaluation Command  
ATTN: DRSTE-AD-M, Mr. John Gehrig  
Aberdeen Proving Ground, MD 21005

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AV: 283-3677

AMMRC

US Army Materials & Mechanics Research Center  
ATTN: DRXMR-PP, Mr. John Gassner  
Watertown, MA 02172

C: 617 923-5521  
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HDL

Harry Diamond Laboratories  
ATTN: DELHD-PO-P, Mr. Julius Hoke  
2800 Powder Mill Road  
Adelphi, MD 20783

C: 202 394-1551  
AV: 290-1551

RIA

Rock Island Arsenal  
ATTN: SMCRI-ENM, Mr. J. W. McGarvey  
Rock Island, IL 61299

C: 309 794-4142  
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WVA

Watervliet Arsenal  
ATTN: SMCWV-PPI, Mr. Charles Hall  
Watervliet, NY 12189

C: 518 266-5319  
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MPBMA

US Army Munitions Production Base Modernization Agency  
ATTN: SMCPM-PBM-DP, Mr. Joseph Taglairino  
Dover, NJ 07801

C: 201 724-6708  
AV: 880-6708

AMRDL

US Army Applied Technology Laboratory  
US Army Research Technology Lab (AVRADCOM)  
ATTN: DAVDL-ATL-ATS, J. Waller  
Fort Eustis, VA 23604

C: 804 878-2771/3073  
AV: 927-2771/3073

DESCOM

US Army Depot System Command  
ATTN: DRSDS-RM-EIT, Mr. Mike Ahearn  
Chambersburg, PA 17201

C: 717 263-6591  
AV: 238-6591

IBEA

US Army Industrial Base Engineering Activity  
ATTN: DRXIB-MT, Mr. James Carstens  
Rock Island, IL 61299

C: 309 794-5113  
AV: 793-5113

Department of the Army

ODCSRDA

ATTN: DAMA-PPM-P, LTC S. Marsh  
Room 3C400, The Pentagon  
Washington, DC 20310

C: 202 695-0507  
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AMETA

US Army Management Engineering Training Activity  
ATTN: DRXOM-SE, Mr. Paul Wagner  
Rock Island, IL 61299

C: 309 794-4041  
AV: 793-4041

DARCOM Intern Training Center

ATTN: DRXMC-ITC-E, Mr. Mickey Carter  
Red River Army Depot  
Texarkana, TX 75507

C: 214 838-2001  
AV: 829-2001

TMDE

US Army TMDE Support Group  
ATTN: DRXTM-S, Mr. Ken Magmant  
Redstone Arsenal, AL 35898

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